5.55 MW Power Block - 6 MW -120 MWh Red Sun thermal battery charged by 4 x AHR 1.3 MW + 3 Opra H2 Turbines 1.85 MW each.

Red Sun / ***Powersource*** 6 MW battery puts out 120 MWh thermal at 1850°C and weighs 6.5 tons and 5.5 m3. Outer heat insulating refractories like the Space shuttle ceramic tiles these metal refractories go up to 2000°C to 2500°C. This retention casing is designed by ***Thyssenkrupp,*** and Red Sun 6 MW charges in 2 hours and has been successfully tested with ***Rolls Royce***, ***Pratt and Whitney***, ***Kawasaki***, ***GE and Siemens*** turbines; successfully testing 2.5 MWe turbines, but runs up to 52 MW ***Siemens SGT*** series. Red Sun lasts 50 years and is 5.55 MW ***Power Block*** insured by ***Lloyds Insurance*** for performance and equipment.

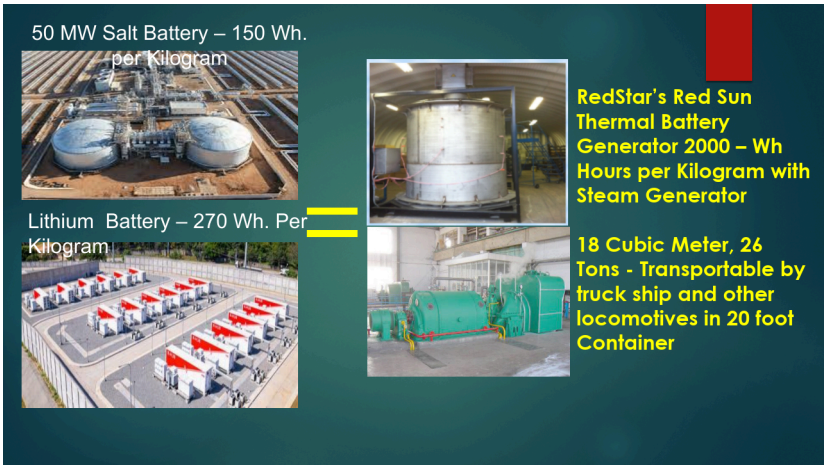
Red Sun Nuclear Charger- AHR

Putting out 88 L/ min hydrogen run 3 x ***Opra Op16*** by hydrogen by ***Aqueous*** **Homogeneous Reactor - AHR** x 4 gives 88 L//min to run 3 x Opra Op16 1.85 MW turbines recharges and backed by 6 MW Red **Sun 5.55 MW *Power Block*** 8500hr/yr x 120/MWh= 3.68 M/ year electricity & $5.6 M/year radioisotopes (see pro forma last pg).

5.55 MW x **8500 hr/ yr** x **$120/ MWh** x **65% eff**. **= $5.66 M/ yr**

Rockwell **5.55 MW Power/ Heat Block Total Cap Cost** - **$6.25 M**
Red Sun Battery - $400k
3 x Opra OP16 - $4.1M
4 x AHR reactor - $1.5 M
Carbon fiber Heatex - $100k
Labor overhead & team $150k
Lease payments $248k/ yr 48 mo lease 20% down

Lloyd's Syndicate Insurance
Electricity Gross Inc before tax - $5.6 M at $120/MWh
Elec After expenses $3.68 M/ yr
8 gm/ d x 350 d/yr x $2000/ gm An242 Po211 = $5.5 M
After expenses = $3.4
Total after expenses = $7 M



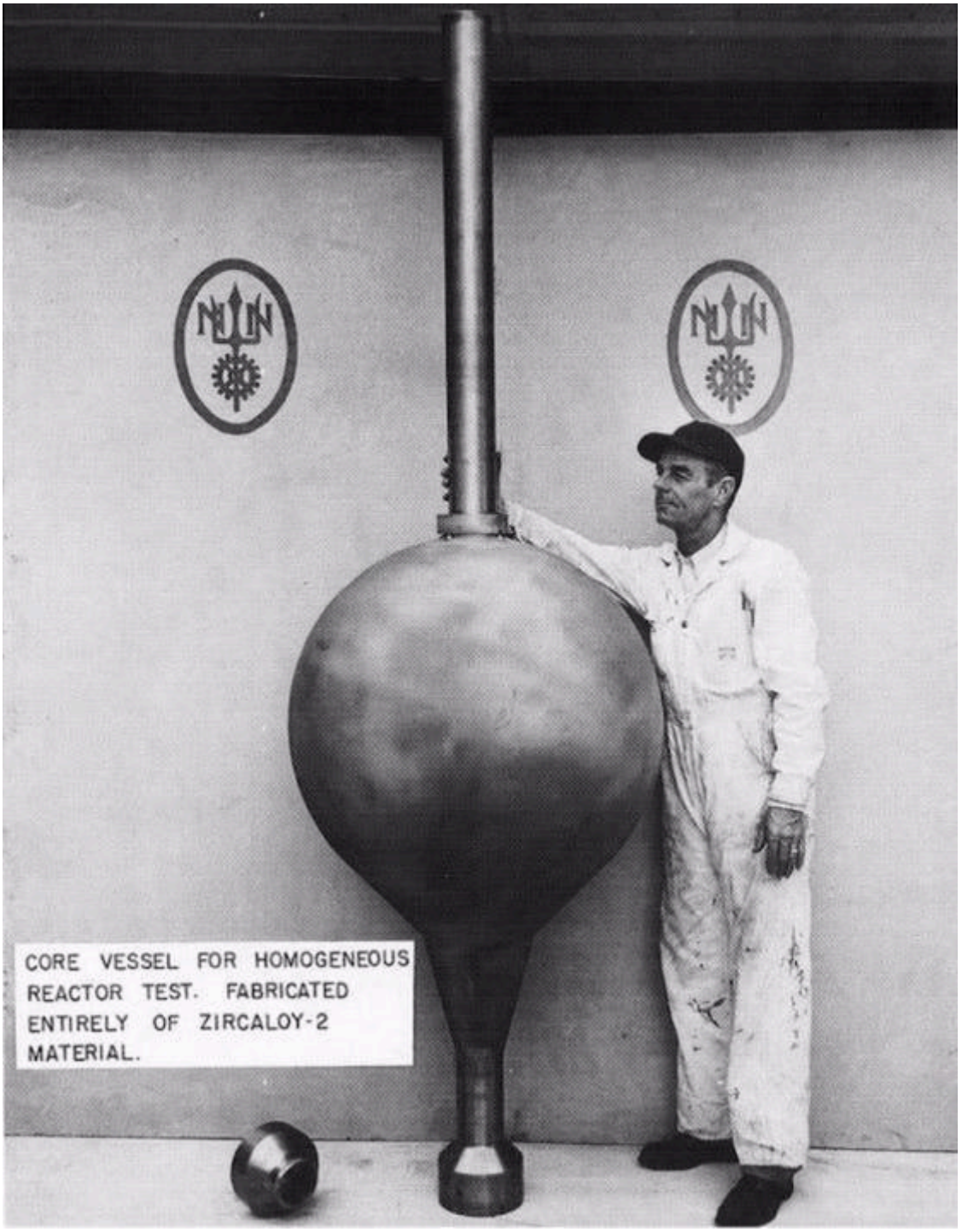
Return On Investment:

ROI = $7 M/ $6.25 M = 112%

RedStar Energime Green Group, Corp. (Redstar) is an International consortium of technology, engineering, management, financial companies and political associates. "Red Sun Mobile"" -proprietary thermal storage system 120 NWh to 360 MWh mobile truck?n ship or train- loaded at only 7 tonnes to 29 tons respectively. With 25 x's less volume per MWh , Red Sun is the definition of reliable badeload power for ships, trains, buses or VTOL at 1000 Wh/kg to 2000 Wh/ kg Nickel molten metal 1850°C 100 kW to 40 MW batteries -enabling deliverance of 120 MW to 360 MWh per day energy in 20 foot shipping containers by truck, ferry or rail, to the client or power plant, in 40 MW thermal batteries at 29 tonnes. The existing gas generators will be retrofitted to run on pure heat by Combined Heat and Power system, Brayton and Steam Turbine, as RED SUN cylinders are designed to do. In addition, cylinders can also be delivered directly to clients for additional revenues with the same cylinders, generating air conditioning, heat, 1000 ºC steam and hot water. The RED SUN MOBILE tanks will be filled from waste heat such as garbage incinerators, and Red Sun new biomass Pyrolysis units that give 17.9 MJ/ kg for hyacinth and up to 38 MJ/kg for coconut shells.

REDSTAŔS'S BIOH2 CATALYST:

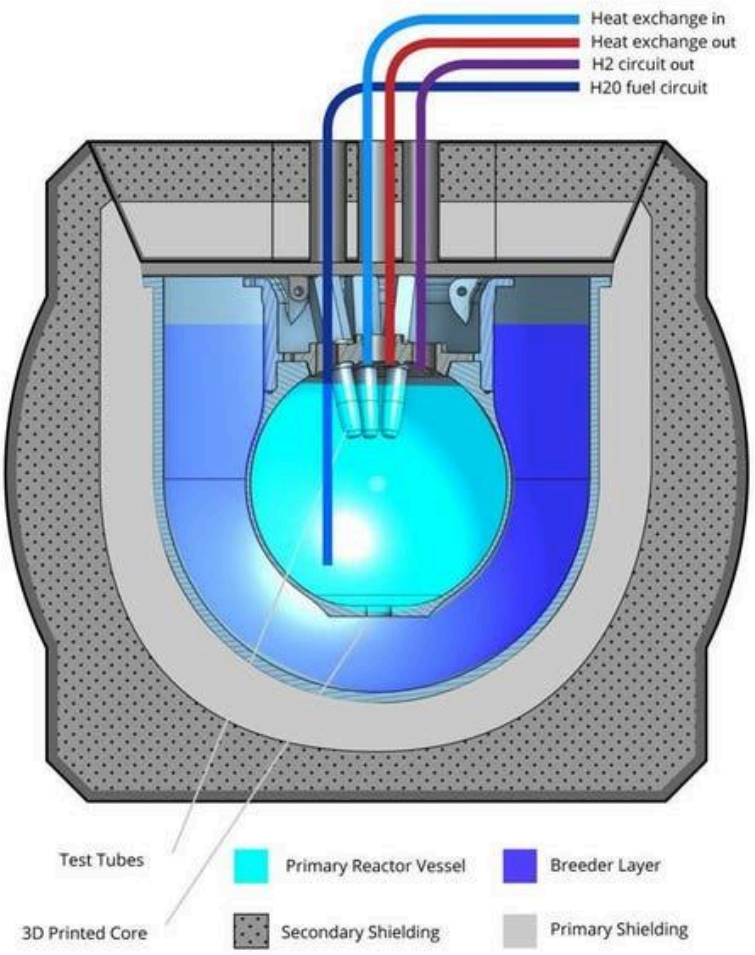
Designed bioengineered proprietary cerium oxide metal complex with patentable calcine procedd, Redstats trade- secret recycled catalyst gives 0.87 L Biohydrogen (STP)/ per one gram dried lake algae. It will be used for two contracts awarded and pending with Laguna Lake Development Authority and Dept of Ecology & Natural Resources. Plus 50 mW PPA with Dept of Energy on 20 year service contract.



REDSTAR Patents & WTE Background:

Featuring top New York nuclear chemist and partner that patented AHR; plus CEO inventor of new breakthrough catalyst that makes 0.87 liters H2 per gram of dried algae and/or biomass like coconut shells (3.9 billion coconut shells/ year in philippines) to transform seaweed to 17.8 MJ/ kg coal replacement with super-efficient catalyst 7 times more productive than platinum- ruthenium costing $12,500 per oz.! Redstar bioengineers exclusive calcine process to transform refinery waste to high power catalyst. With extensive 3 decade career developing algae to energy tech- including ultrasound ***Quantum Fractionation in 1999;*** plus, with 24 years developing hydrogen systems and top ten biotech company co- founder 2009 to 2010 (www.originclran.com) new production methods using

resonance and catalysts, including with the most prominent Japanese scientists and companies listed below. We also worked with Thyssenkrupp to design our batteries Red Sun and PowerSource.
https://docs.google.com/presentation/d/1yB_dQYAU29GgA6M5PW03XzwTcfnAPveU/edit?usp=drivesdk&ouid=117281628847780613570&rtpof=true&sd=true
https://drive.google.com/file/d/0B4P9cFXgSr4-NndxQzV1X1hFV3M/view?usp=drivesdk&resourcekey=0-yJEQfMi7sCgLEav0N5ABQADd



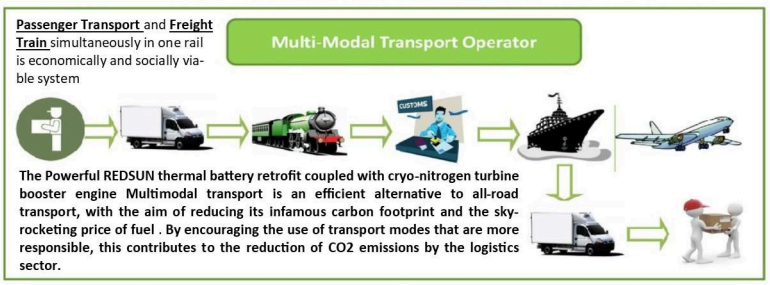
Patents:

♤ ***Red Sun Thermal Battery*** +
♤ ***NON- COMBUSTION BRAYTON CYCLE***
♤ ***Aqueous Homogeneous Reactor - AHR***
♤ ***Redstar Crystal Fluoride Reactor Core & Neutron*** https://patents.google.com/patent/US20130247585A1/en **blanket- non- corrosive neutron and acid - proof**

Through joint ventures and licences Redstar has Exclusive rights for ***thermal phase change molten metal battery*** called ***Powersource/Red Sun*** 100 kW to 40 MW; and second patent running fuelless ***Non- Combustion Brayton Cycle*** run by pure heat through Red Sun thermal battery 1000 Wh/ kg weighs 4x's less than Li-ion/ kWh.

Retrofits Diesels and Turbine

Featuring second exclusive patented ***Non- Combustion***
Above- the Aqueous Homogeneous Reactor giving up to 1.3 MW makes 22 L/ min and makes Am241 and Po up to 8 grams per day, worth $2000 per gram! An order of magnitude more income than electricity.



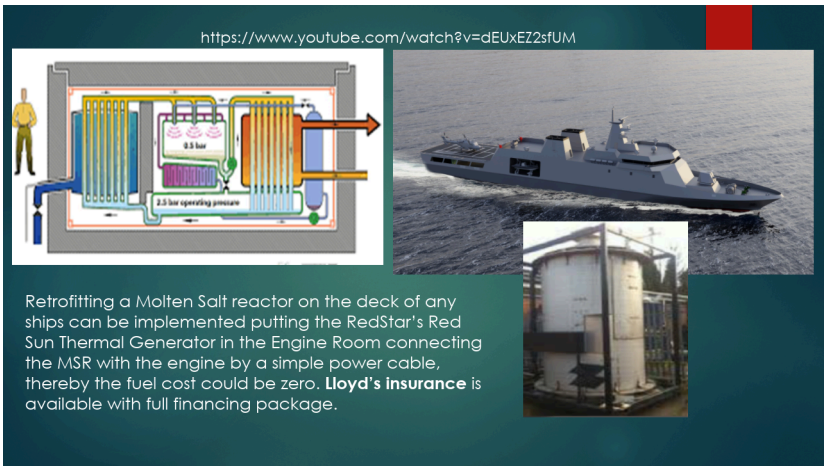
The second exclusive patent is Non- Combustion Brayton Cycle operating all engines and turbines on pure heat using heat exchangers in fuel combustion chamber of turbines and rail of diesels. This brings power prices back 100 years with nuclear at $40/ MWh. For ships, the 5.55 MW Power Block is major transportation paradigm shift with 12 m3 total footprint, the Red Sun Power Bock retrofits all engine rooms, buildings, and trains.
https://drive.google.com/file/d/1I9xYoG0CWbMAcHPqYo7V4EmI5hCqLdKe/view?usp=drivesdk

Plus; the thermal battery operation and AHR giving no GHG vs H2 at 12 CO2 per kWh. With 32 MW having 300+ MWh per charge as mobile Powersource for cities that retrofits diesel generators

(smaller 100 kWp to 8 MWp thermal batteries for homes, trams, buses and yachts are called Powersource). Red Sun thermal batteries are 8 MW up to 40 MWp that fits in a shipping container at 29 tons. And; provides 1500°C process heat for industry at 1000 C to 2000°C, which is 80% of total energy markets and demand in most 1st world countries.

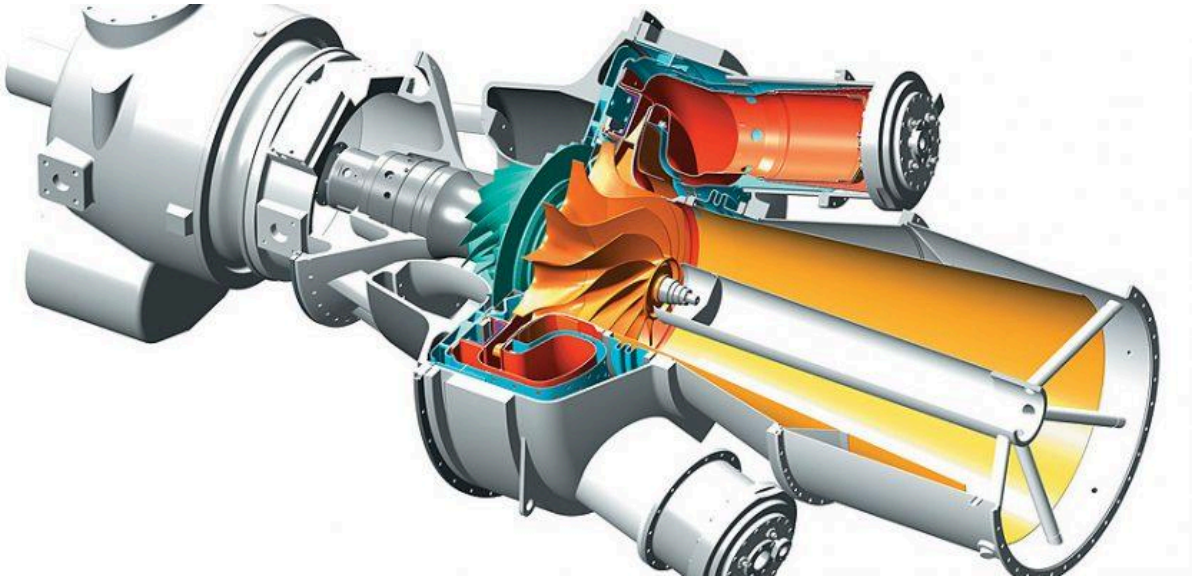
Satellite and Cell 24/7 Tracking:

The battery is tracked by state of the art communications company ***Max***- ***Tech***: www.max-mesh.com - so we know where our battery is every second and can track it on Google maps to within 25 meters by cell, satellite or internet.



https://drive.google.com/file/d/1ZfzFxUP30GvU6B6kZzWc4yWlQZp7yYO4/view?usp=drivesdkDd

Here are some details for use in transportation, rail and ships that also need to decarbonize, and more importantly- greatly lower costs. Also, going wireless on the trains saves 40% on building the tracks without catenary wires according to Transportation minister Mr. Bautista who is ready to jv with zredstar on the 1600 km ***Bicol Express*** under feasibility study paid by ***ADB*** loan to ***DoTr***.



Opra Op 16 hydrogen turbine 1.85 MW x 3 = 5.55 MW

Atlantis Mariner Series 100 ft + Sailboat/Yacht

Hercules: 2000 KW Thermal Battery (8400 kWh/chg) + 44 kW AHR 88L/min Recharging + Hybrid Electric Diesel + Azipods – ABB Bus- €1.3 m

20 hour operation – 800 km – 900 km Range – 30 knots

2 x 250 kW Tesla Turbine Gensets running on AHR 88L/min/ 44 -88 kW Genset 4hr charge with AHR 5.5MW

+

Induction 98% Charging 350 kW–Total Wt2700 kg – 67% Recharge while running Safe!

Atlantis Apollo Series: 33tons 300+ Sailboat, Cargo, Cruise Ships, large Retrofit Ferries Navy Vessel+€1.8 to €4.8 m with Double AHR 5.5 MW

RED SUN 32,000 KW (90 MWh) 4x AHRs + Thermal Battery + 480 kW AHR 88L/min H2 Recharging + Hybrid Electric Diesel + Azipods – ABB Bus+2AziPods

48 hour operation – 2100 km Range – 25 kn 8 hr Recharging with h2/AHR 88L/min H2

2 x 250 kW Tesla Turbine Gensets running on 4x 500kW AHR 88L/min Charging POWERSOURCE while Running (8 hr recharge)

RED SUN

AERONAUTICS – Hydrogen Planes + AHR with 3656 kWh Battery!

POWERSOURCE 1300 kW with RX-8 Genset can give 2500 km range by charging hydrogen into thermal batteries~ZeroAvia plane can fly 500 miles, powered entirely by hydrogen technology that can be run on hydrogen like Opra Op 16 turbine and Mazda Rx8 wankel cycle ceramic hydrogen engine put out in 2007.

ZeroAvia, the startup that designed the hydrogen-fueled electric powertrain inside the plane, has been testing the technology over the past year and it plans to begin supplying the powertrain for use in planes with as many as 20 seats, on flights up to 500 miles long.

Several other startups are also working on technology designed to cut emissions from **air travel, an industry responsible for nearly 900 million metric tons of CO2 emissions** a year at a time when emissions need to begin to shrink to zero. But most other companies rely on batteries to store electric power. (Ampaire, a startup that recently took its first public flight, retrofits existing planes with hybrid-electric systems; Eviation, another startup, is designing 100% battery-electric planes.) ZeroAvia saw advantages in using hydrogen. “For the foreseeable future, actually getting a sizable aircraft in the air for a reasonable amount of time will be quite difficult with batteries”. A system based on hydrogen fuel cells is around four times as energy dense as the best batteries currently available, he says.

For airlines, switching to hydrogen-fueled airplanes for short flights would save money. ZeroAvia estimates that the total cost of operation will be around half that of flying conventional planes because of savings on fuel costs, more efficiency, But using liquid hydrogen would require more work in safety testing and certification; for now, the company is using compressed hydrogen stored in carbon fiber cylinders, similar to cars that are already on the road like the Toyota Mirai. The cylinders make the planes 10 to 14 x's heavier, meaning they can’t travel as far. And; cryo nitrogen makes more sense/cents and saves 95% of the cost at 2c/ kWh. Moreover you can use cheaper available stainless steel tanks and cant explode or cause metal embrittlement and corrodion. Thus, the Red Sun Non-combustion Brayton cycle jet turbine prppulsion or cryo nitrogen is only practical way forward for jets and airplanes vecause of space (AhR as big as doshwasher) and weight(hydrogen carbon fiber tanks 14 x's heavier for equivalent diesel tank and fuel!

Fresh Air

To clean up the aviation industry, NASA-funded scientists are working to develop an all-electric aircraft powered by cryogenically-liquified hydrogen.

But current hydrogen cells lacked the energy density necessary to power a jet without also weighing it down too much. Cryogenically cooling the hydrogen could give rise to fuel cells dense and compact enough to do the trick, but the technology to power a plane with them doesn't exist yet —

“Advances in recent years on non-cryogenic machines and drives have brought electric propulsion of commercial regional jets closer to reality, but practical cryogenic systems remain the ‘holy grail’ for large aircraft because of their unmatched power density.

Petroleum-derived liquid fuels currently provide around 95% of transport energy, and roughly 60% of crude oil produced is used to make transport fuels [2], [3], [4], [7]. The demand for transport fuels across the world is very large, at around 4.9 billion liters each of gasoline and diesel and 1.3 billion liters of jet fuel *each day* [8], with an expected yearly growth of around 1% [2], [7]. Changes in the transport sector are occurring because of increasing demand driven by increasing population and prosperity;

The company is already in talks with several airlines, he says. The technology could see early adoption in places like Norway, where the government plans to move to 100% zero-emissions flights by 2040.

"The hydrogen chemical energy is converted to electrical energy through a series of fuel cells, which drive the ultra-efficient electric propulsion system. The low temperature requirements of the hydrogen system also provide opportunities to use superconducting, or lossless, energy transmission and high-power motor systems.

"It's similar to how MRIs work, magnetic resonance imaging," Ansell added. "However, these necessary electrical drivetrain systems do not yet exist, and the methods for integrating electrically driven propulsion technologies into an aircraft platform have not yet been effectively established. This program seeks to address this gap and make foundational contributions in technologies that will enable fully electric aircraft of the future."

The co-principal investigator on the project is Associate Professor Kiruba Haran in U of I's Department of Electrical and Computer Engineering.

"Advances in recent years on non-cryogenic machines and drives have brought electric propulsion of commercial regional jets closer to reality, but practical cryogenic systems remain the 'holy grail' for large aircraft because of their unmatched power density and efficiency," Haran said. "The partnerships that have been established for this project position us well to address the significant technical hurdles that exist along this path." **Cryogenic H2 gives 5 x's the range as 700 bar H2.** Only 185 bar is allowed for all marine applications under IMO.

Summary Conclusions- RED SUN Transition to Clean Energy:

At this time when transport -powered largely by ICEs using mostly petroleum-based fuels for decades, is at the crossroads with Crude at $72 USD/BBL today Dec 30th, 2024. Thus, all trains, ships and eventually planes need to be retrofit along with the buildings, train stations, airports and all energy systems must be rebuilt and remodeled using the Redstar retrofit systems that feature ***RED SUN MOBILE and smaller PowerSource*** thermal batteries at 1740ºC that have been tested and certified by ***GE Marine***, ***Siemens Marine***, ***Rolls Royce***, ***Pratt and Whitney*** to ***Cummins***, ***Man*** and ***Wartsila*** - to run all jet engines, diesels and trains, the latter costing $4.9 m including a used ***GE diesel*** electric locomotive. This retrofit pays for itself in 196 days- including the locomotive! Plus; as part of the transition, Redstar has seven proprietary charging systems for the RED SUN/PowerSource Batteries including 4 proprietary Hydrogen Systems featuring the brand new Redstar algae to H2 system that retrofits every train station and makes 18 tons of biohydrogen per day from seaweed!

The RED SUN thermal battery is an adapter/transformer of wind and solar into baseload power as transformer for renewables by induction charging the thermal batteries at 98.6% and discharging at the same or other locations into ready prime time baseload power for large power plants with scalable power to retrofit and run Siemens 52 MW gas fired power plants- replacing gas; and; to power ICE's and diesels/turbines by pure heat in unique patented Thermal Electric Platform that allows using renewables in a baseload power plant by stabilizing and arbitraging at night renewable energy that is otherwise lost and wasted for wind and hydro.

The RED SUN Battery is also a transformer for all types of industry, while everything runs on heat- The RED SUN is the Master- including AC and large refrigeration systems for train stations and airports! And; by allowing the collection of cheap night energy to sell in the day, RED SUN Arbitrage carves a new energy niche with its mobile battery by creating a large financial gain by buying renewable energy at night by placing its mobile 4 MW to 32 MW RED SUN battery (29 tons) at renewable sites from 10 PM to 8 AM, and delivering in the day to distributed power plants to sell at peak rates and when demand is at its highest.

Hydrogen is expected to be a 211 billion industry by 2020, as hydrogen planes and hydrogen cars and trucks are already out now with **Honda, Toyota and**

Nikola Trucks and now Zero Avia.. Furthermore, over the next 20 year generational scale, the shortage of oil will not constrain growth in transport; known reserves of oil have been increasing faster than consumption over the last several decades, and the current reserves should last for at least the next 50 years at current consumption rates [8], [9]. Therefore, it is imperative to improve the efficiency, environmental impact, and affordability of ICEs, which will mostly continue to power transport in the foreseeable future. This will cause a transition to hybrid ICE cars with electric power trains that have the ability to use hydrogen also to power generators onboard, with the ability to scale up to large planes, trains, and trucks. Plus; the ability of charging the RED SUN thermal batteries with hydrogen running small 250 kW to 350 kW gensets like the RX-8 ($15,000) rotary hydrogen engine running the ***Inductotherm*** induction units, that can charge thermal batteries 200 kW (250 kg) to 32 MW (29tons). Thus, the RED SUN thermal electric platform brings hydrogen technology and vehicles including planes into fruition today! And; allows renewables to plug-in directly at 98% efficiency!

RETROFITTING DESEL TRAINS & ***SHIPS*** **TO RUN AT 20CON THE DOLLAR**!!

With biohydrogen from the AHR at 28c/ kg or 3 c/ kWh, Red Sun can monopolise ship and train propulsion! Plus RED SUN gives highest energy density, critical for transportation and airplanes, tripling range and 32 MW gives 360 MWh and runs GE Diesel Electric train 700 km to with 64 MW 1400 km (and is self-charging while running) utilizing the RED SUN thermal batteries onboard. Plus RED SUN gives a safe redundant back-up system that canH store energy for months, plus have the best energy per weight ratio of any battery, at 32 MW/29 tons = 1.1 kW/kg; with an amazing 120 MWh in 6 MW (7 tonnes) with Tesla Model S at 85 kWh/540 kg = 0.16 kWh/kg. Thus RED SUN has seven (7) times the energy per kg as a Model S, and the 32 MW RED SUN battery contains the equivalent of over ***4000 TESLA MODEL S*** batteries!

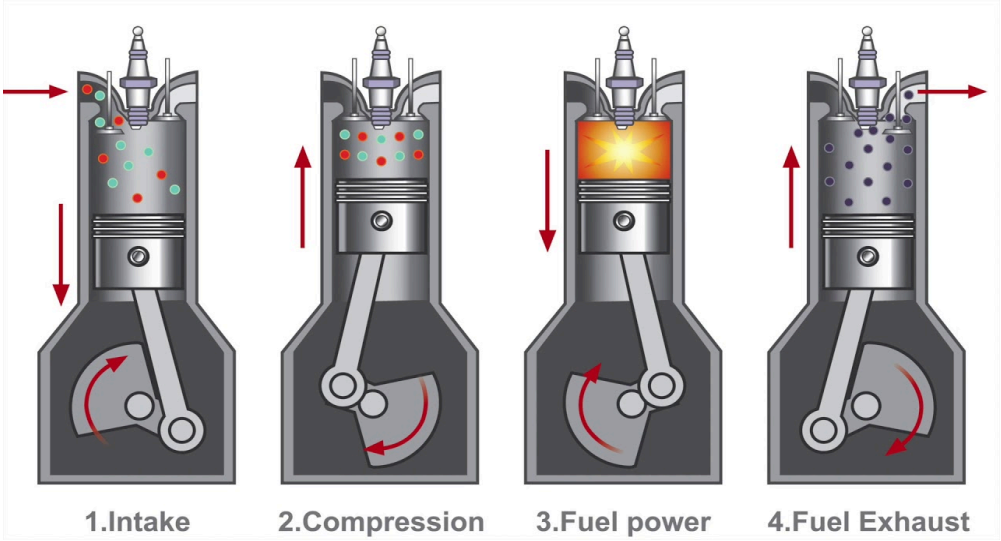
Thus, lithium battery will be left behind in favor of RED SUN thermal electric platform, as nothing can beat it for energy density and giving one million long-lasting cycles (lasts 40 years and warranty from ***Thyssenkrupp*** is for 10 years) vs, 6,000 cycles (8 years) for the Tesla Model S. And; introducing Redstart's AHR 88L/min, a denser version of hydrogen that can release hydrogen on demand with 2.5's more per Liter than 700 bar H2, shown above, which gives the highest travel distance for large vehicles and cargo, while giving a cost of only 42 cents/kg vs clean hydrogen in the USA is averaging $13 USD per kg- giving 1800 USD/ MWh vs $40 / MWh running nucear HHR charging- thus giving better than an order of magnitude cost per mile than traditional hydrogen. Which on the ***Nikola Hydrogen Truck*** is expected to be 90 cents per mile https://nikolamotor.com/motor. Thus, with AHR 88L/min would drop running costs to 3c?/ kWh or 3.1 cents per mile! The RED SUN and AHR 88L/min integrated thermal electric platform is the definition of the ***HYDROGEN ECONOMY*** **at work today!**

The CEO helped develop the Rx - 8 Mazda ceramic hydrgen engine from 1998 to 2007. A triple rotar 787 Mazda won Lemans 1981! This can support 2 pancake axial generators running 100% hydrogen for 350 kW for 1.4 MW for 4, and 2.8 MW for 8
Cost $325k for 350 MW.

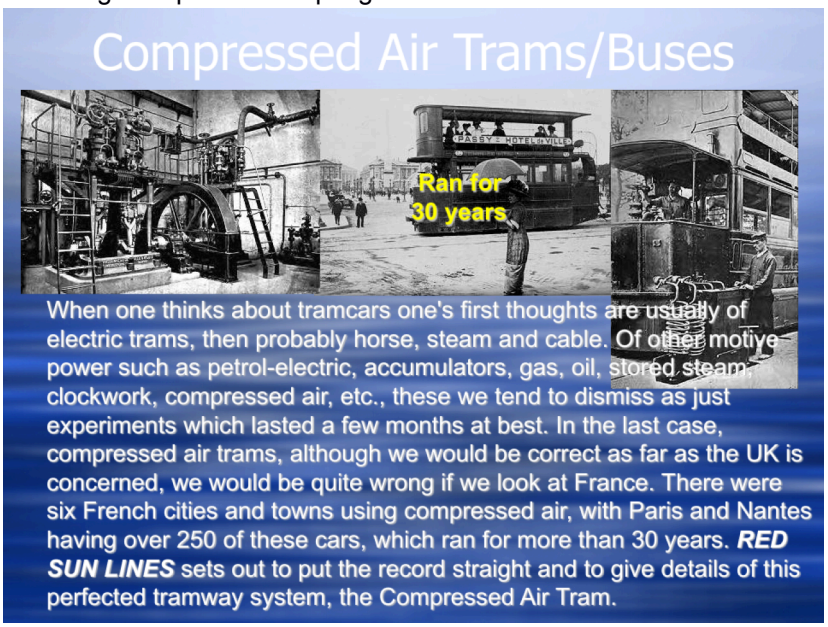
♤ The magic of ***RED SUN*** is heated compressed air gives twice the energy of gasoline 20 kWh/L vs 11 kWh/Lfor gasoline, and N2 gives 1500 x's expansion gives 3 times more power over gasoline - meaning triple HP & heavier loads for ship, train, and truck
♤ RED SUN mimics the Sun-Earth relationship by charging by induction at 98.6% efficiency!

♤ ***RED SUN/PowerSource*** outer containment designed & guaranteed 10 yr by *Thyssenkrupp!* Triple charging with 6 ME recharge is 3 hrs, which hyper-extends range 3x's to 7 x's with onboard thermal battery-turbine charging, while *AHR 88L/min.* is running ***Mazda Rx- 8*** at 350 kW or newer 112 kW ***Rx - 30*** onboard running induction 250 kW chargers, & regenerative braking charges thermal (or electric chemical battery) also! The small size allows retrofitting to all vehicles!

♤ With *RED SUN* 6 MW 120 MWh hyper-extends range 3x's to 7 x's for ships & trains plus much higher torque.
♤ Featuring ***5.55 MW Red Sun Power Block*** onboard thermal battery-turbine nuclear hydrogen / steam charging, while AHR 88L/min biohydrogen is generated onboard, & regenerative braking charges Red Sun battery also.
♤ This is the thermoelectric platform mimicking the Earth and Sun- Thermoelectric molten Ni Fe alloy transforms 98.6% electricity to core heat in metal battery with incredible energy density-**a battery as big as suitcase powers turboprop 8 hours full power (180kW).**
♤ *RED SUN* uses 150 year old ***Inductotherm*** using EMF crucible to heat Ni-alloy used in refining www.inductotherm.com to heat to white hot in seconds (1500ºC) ♤ Charging like Sun-Earth at 98.6% efficiency without inverter in real time



♤ Cryo nitrogen added to all diesel rails give 3.5x ‘s torque as petrol heating N2 to 200°C gives 1500x's gas expansion - triple gasoline!



Above -Nitrogen trains running 1842 to 1930s throughout Europe and parts of Americas, Africa and Switzerland ran coal boilers replaced by Red Sun+ cryo Nitrogen

♤ **All engines designed to use pure heat- RED SUN gives 1450°C pure heat non- intermittently and enables 50% longer life and half the maintenance + 25 db less noise!**

♤ Thermal Nickel batteries are scalable at $20 USD per 1 kWh capacity vs ***Tesla Panasonic*** at $111 USD /1kWh capacity- **while lithium batterie are 60x’s bigger than RED SUN!**♤ The Tesla battery is Li-ion that typically lasts 6 -8 years- vs ♤

♤ POWERSOURCE – 50 yr with10 year warranty from ***Thyssenkrupp***.- that designs outer containment for *RED SUN/Powersource*.

♤ After the piston compresses the fuel-air mixture, the spark ignites it, causing combustion. The expansion of the combustion gases pushes the piston during the power stroke, which can be dine with 3.5x's more force or torque using cryo nitrogen.

♤ All renewables can be plugged into thermal battery + genset at 98% through standard induction EMF heat crucibles by www.inductotherm.com to store for 6 months and only lose 145°C From 1850°c to 1605°C can still make baseload & back- up power down to 600°C, so is unaffected by 6 month wait!

♤ Hydrogen is very expensive and extremely expensive to store, losing 40% of its contained energy compressing and cooling to - 253°C. Plus carbon fiber tanks are very expensive and bulky. On ships, compressed hydrogen is only allowed at 195 bar under ***IMO*** regulations, so tanks weigh 14x's the weight of normal diesel ones containing equivalent energy. Plus, insurance becomes difficult and more expensive.

♤ Green hydrogen costs $4 -$6 USD/kg in the US to €11/kg in Germany. An H2 Mobility refueling station costs €1.9 M.

New solid state batteries from Toyota are only 400 Wh per kg. ***5.55 MW Power Block - 6 MW -120 MWh Red Sun thermal battery charged by 4 x AHR 1.3 MW + 3 Opra H2 Turbines 1.85 MW each.***

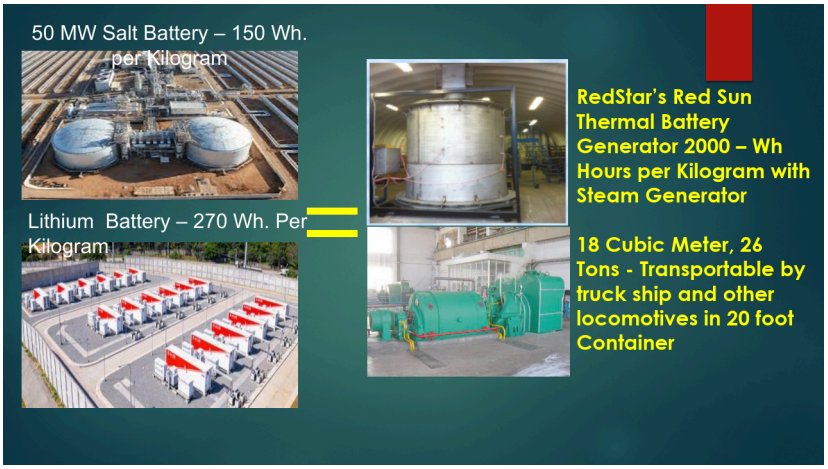
Red Sun / ***Powersource*** 6 MW battery puts out 120 MWh thermal at 1850°C and weighs 6.5 tons and 5.5 m3. Outer heat insulating refractories like the Space shuttle ceramic tiles these metal refractories go up to 2000°C to 2500°C. This retention casing is designed by ***Thyssenkrupp,*** and Red Sun 6 MW charges in 2 hours and has been successfully tested with ***Rolls Royce***, ***Pratt and Whitney***, ***Kawasaki***, ***GE and Siemens*** turbines; successfully testing 2.5 MWe turbines, but runs up to 52 MW ***Siemens SGT*** series. Red Sun lasts 50 years and is 5.55 MW ***Power Block*** insured by ***Lloyds Insurance*** for performance and equipment.

Red Sun Nuclear Charger- AHR

Putting out 88 L/ min hydrogen run 3 x ***Opra Op16*** by hydrogen by ***Aqueous*** **Homogeneous Reactor - AHR** x 4 gives 88 L//min to run 3 x Opra Op16 1.85 MW turbines recharges and backed by 6 MW Red **Sun 5.55 MW *Power Block*** 8500hr/yr x 120/MWh= 3.68 M/ year electricity & $5.6 M/year radioisotopes (see pro forma last pg).

5.55 MW x **8500 hr/ yr** x **$120/ MWh** x **65% eff**. **= $5.66 M/ yr**

***Rockwell* 5.55 MW Power/ Heat Block Total Cap Cost** - **$6.25 M**
Red Sun Battery - $400k
3 x Opra OP16 - $4.1M
4 x AHR reactor - $1.5 M
Carbon fiber Heatex - $100k
Labor overhead & team $150k
Lease payments $248k/ yr 48 mo lease 20% down
Lloyd's Syndicate Insurance
Electricity Gross Inc before tax - $5.6 M at $120/MWh
Elec After expenses $3.68 M/ yr
8 gm/ d x 350 d/yr x $2000/ gm An242 Po211 = $5.5 M
After expenses = $3.4
Total after expenses = $7 M



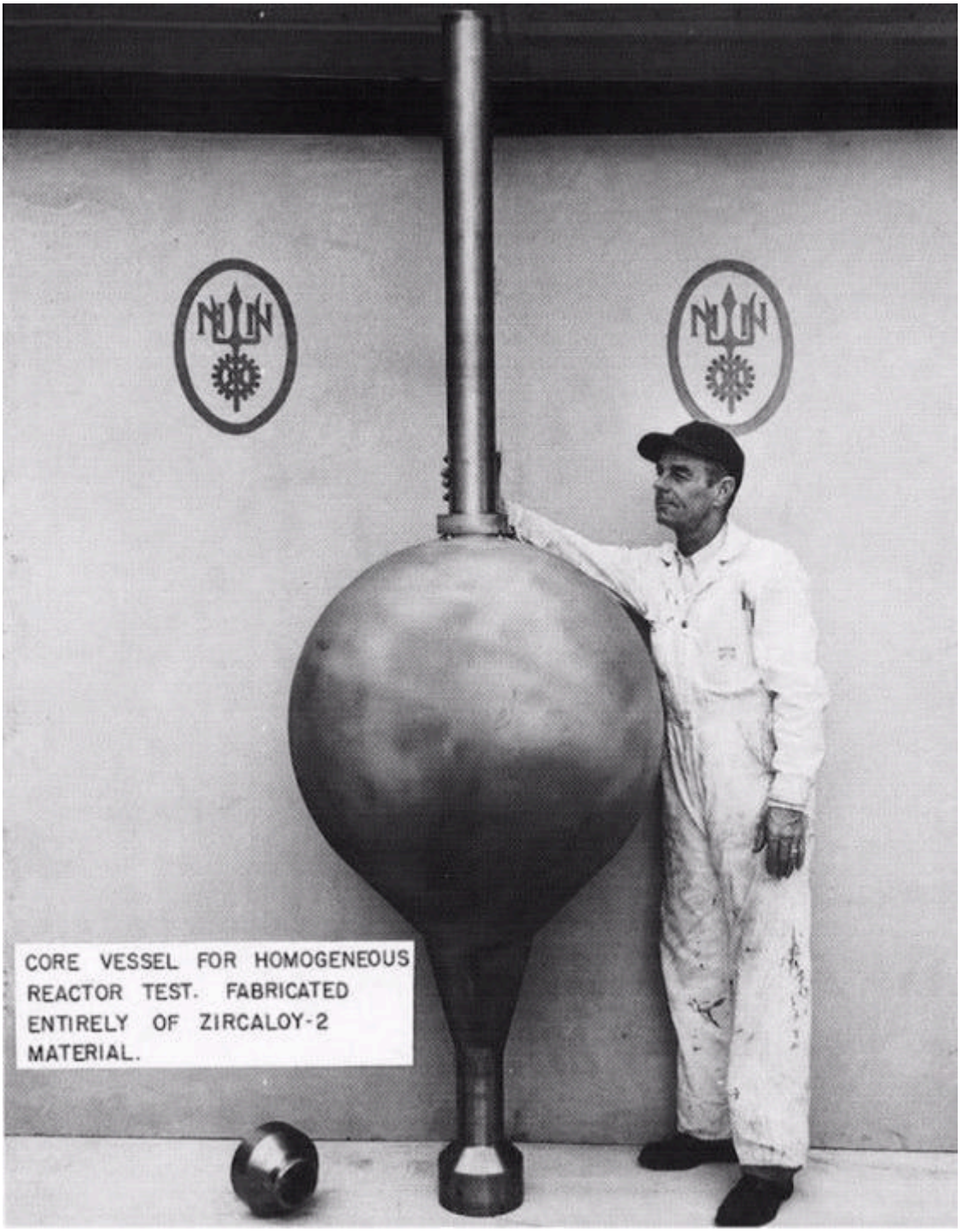
Return On Investment:

ROI = $7 M/ $6.25 M = 112%

RedStar Energime Green Group, Corp. (Redstar) is an International consortium of technology, engineering, management, financial companies and political associates. "Red Sun Mobile'" -proprietary thermal storage system 120 NWh to 360 MWh mobile truck?n ship or train- loaded at only 7 tonnes to 29 tons respectively. With 25 x's less volume per MWh , Red Sun is the definition of reliable badeload power for ships, trains, buses or VTOL at 1000 Wh/kg to 2000 Wh/ kg Nickel molten metal 1850°C 100 kW to 40 MW batteries -enabling deliverance of 120 MW to 360 MWh per day energy in 20 foot shipping containers by truck, ferry or rail, to the client or power plant, in 40 MW thermal batteries at 29 tonnes. The existing gas generators will be retrofitted to run on pure heat by Combined Heat and Power system, Brayton and Steam Turbine, as RED SUN cylinders are designed to do. In addition, cylinders can also be delivered directly to clients for additional revenues with the same cylinders, generating air conditioning, heat, 1000 ºC steam and hot water. The RED SUN MOBILE tanks will be filled from waste heat such as garbage incinerators, and Red Sun new biomass Pyrolysis units that give 17.9 MJ/ kg for hyacinth and up to 38 MJ/kg for coconut shells.

REDSTAŔS'S BIOH2 CATALYST:

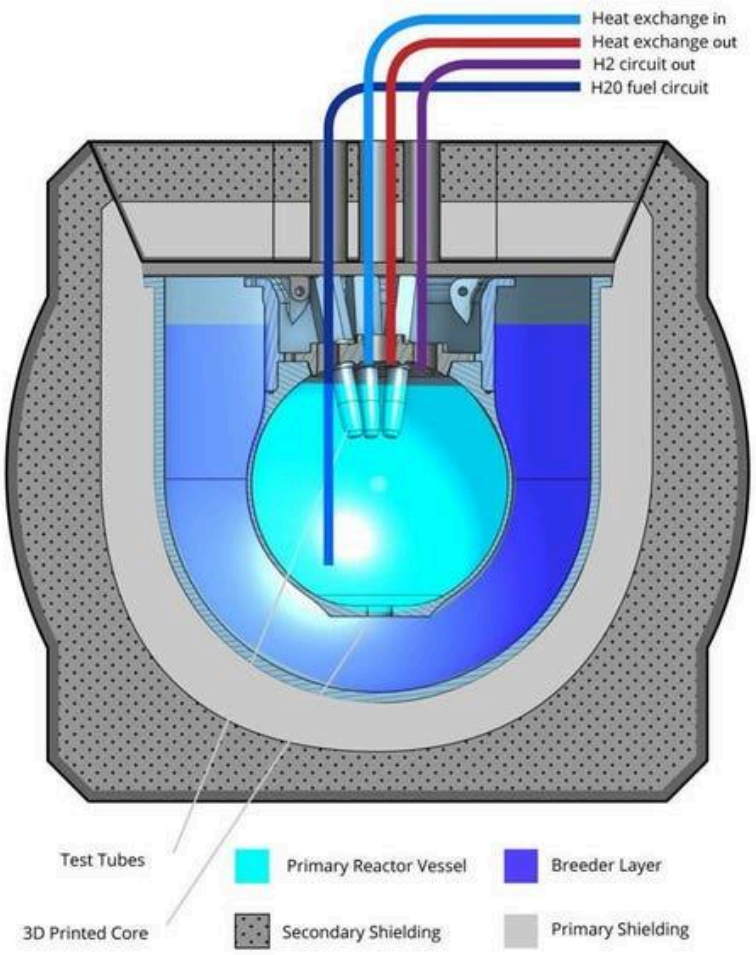
Designed bioengineered proprietary cerium oxide metal complex with patentable calcine procedd, Redstats trade- secret recycled catalyst gives 0.87 L Biohydrogen (STP)/ per one gram dried lake algae. It will be used for two contracts awarded and pending with Laguna Lake Development Authority and Dept of Ecology & Natural Resources. Plus 50 mW PPA with Dept of Energy on 20 year service contract.



REDSTAR Patents & WTE Background:

Featuring top New York nuclear chemist and partner that patented AHR; plus CEO inventor of new breakthrough catalyst that makes 0.87 liters H2 per gram of dried algae and/or biomass like coconut shells (3.9 billion coconut shells/ year in philippines) to transform seaweed to 17.8 MJ/ kg coal replacement with super-efficient catalyst 7 times more productive than platinum- ruthenium costing $12,500 per oz.! Redstar bioengineers exclusive calcine process to transform refinery waste to high power catalyst. With extensive 3 decade career developing algae to energy tech- including ultrasound ***Quantum Fractionation in 1999;*** plus, with 24 years developing hydrogen systems and top ten biotech company co- founder 2009 to 2010 (www.originclran.com) new production methods using

resonance and catalysts, including with the most prominent Japanese scientists and companies listed below. We also worked with Thyssenkrupp to design our batteries Red Sun and PowerSource.
https://docs.google.com/presentation/d/1yB_dQYAU29GgA6M5PW03XzwTcfnAPveU/edit?usp=drivesdk&ouid=117281628847780613570&rtpof=true&sd=true
https://drive.google.com/file/d/0B4P9cFXgSr4-NndxQzV1X1hFV3M/view?usp=drivesdk&resourcekey=0-yJEQfMi7sCgLEav0N5ABQADd



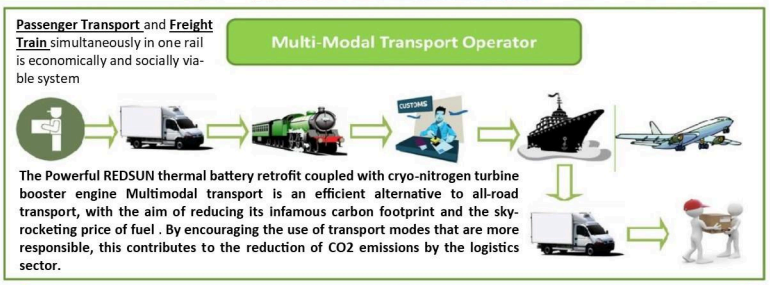
Patents:

♤ ***Red Sun Thermal Battery*** +
♤ ***NON- COMBUSTION BRAYTON CYCLE***
♤ ***Aqueous Homogeneous Reactor - AHR***
♤ ***Redstar Crystal Fluoride Reactor Core & Neutron*** https://patents.google.com/patent/US20130247585A1/en **blanket- non- corrosive neutron and acid - proof**

Through joint ventures and licences Redstar has Exclusive rights for ***thermal phase change molten metal battery*** called ***Powersource/Red Sun*** 100 kW to 40 MW; and second patent running fuelless ***Non- Combustion Brayton Cycle*** run by pure heat through Red Sun thermal battery 1000 Wh/ kg weighs 4x's less than Li-ion/ kWh.

Retrofits Diesels and Turbine

Featuring second exclusive patented ***Non- Combustion***
Above- the Aqueous Homogeneous Reactor giving up to 1.3 MW makes 22 L/ min and makes Am241 and Po up to 8 grams per day, worth $2000 per gram! An order of magnitude more income than electricity.



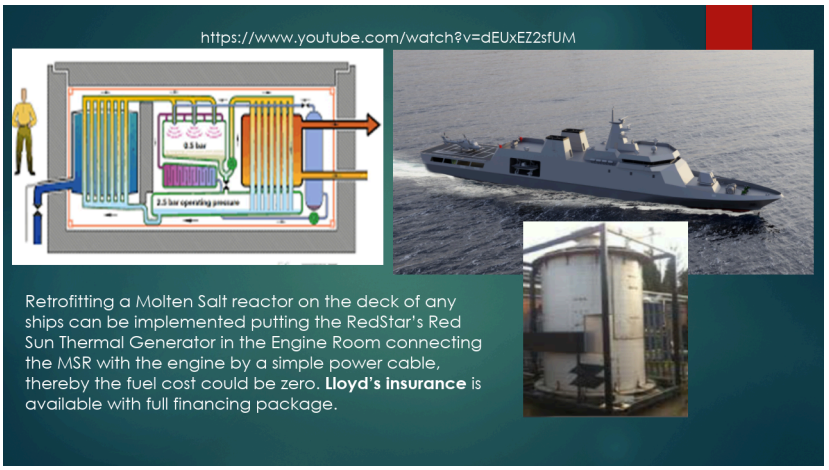
The second exclusive patent is Non- Combustion Brayton Cycle operating all engines and turbines on pure heat using heat exchangers in fuel combustion chamber of turbines and rail of diesels. This brings power prices back 100 years with nuclear at $40/ MWh. For ships, the 5.55 MW Power Block is major transportation paradigm shift with 12 m3 total footprint, the Red Sun Power Bock retrofits all engine rooms, buildings, and trains.
https://drive.google.com/file/d/1I9xYoG0CWbMAcHPqYo7V4EmI5hCqLdKe/view?usp=drivesdk

Plus; the thermal battery operation and AHR giving no GHG vs H2 at 12 CO2 per kWh. With 32 MW having 300+ MWh per charge as mobile Powersource for cities that retrofits diesel generators

(smaller 100 kWp to 8 MWp thermal batteries for homes, trams, buses and yachts are called Powersource). Red Sun thermal batteries are 8 MW up to 40 MWp that fits in a shipping container at 29 tons. And; provides 1500°C process heat for industry at 1000 C to 2000°C, which is 80% of total energy markets and demand in most 1st world countries.

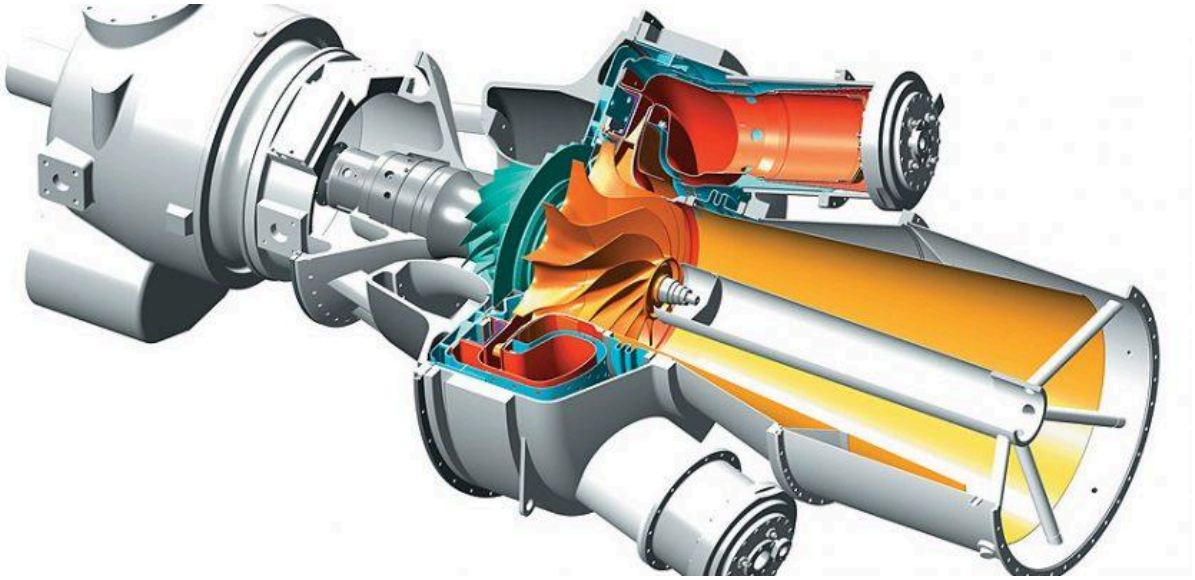
Satellite and Cell 24/7 Tracking:

The battery is tracked by state of the art communications company ***Max***- ***Tech***: www.max-mesh.com - so we know where our battery is every second and can track it on Google maps to within 25 meters by cell, satellite or internet.



https://drive.google.com/file/d/1ZfzFxUP30GvU6B6kZzWc4yWlQZp7yYO4/view?usp=drivesdkDd

Here are some details for use in transportation, rail and ships that also need to decarbonize, and more importantly- greatly lower costs. Also, going wireless on the trains saves 40% on building the tracks without catenary wires according to Transportation minister Mr. Bautista who is ready to jv with zredstar on the 1600 km ***Bicol Express*** under feasibility study paid by ***ADB*** loan to ***DoTr***.



Opra Op 16 hydrogen turbine 1.85 MW x 3 = 5.55 MW

Atlantis Mariner Series 100 ft + Sailboat/Yacht

Hercules: 2000 KW Thermal Battery (8400 kWh/chg) + 44 kW AHR 88L/min Recharging + Hybrid Electric Diesel + Azipods – ABB Bus- €1.3 m

20 hour operation – 800 km – 900 km Range – 30 knots

2 x 250 kW Tesla Turbine Gensets running on AHR 88L/min/ 44 -88 kW Genset 4hr charge with AHR 5.5MW

+

Induction 98% Charging 350 kW–Total Wt2700 kg – 67% Recharge while running Safe!

Atlantis Apollo Series: 33tons 300+ Sailboat, Cargo, Cruise Ships, large Retrofit Ferries Navy Vessel+€1.8 to €4.8 m with Double AHR 5.5 MW

RED SUN 32,000 KW (90 MWh) 4x AHRs + Thermal Battery + 480 kW AHR 88L/min H2 Recharging + Hybrid Electric Diesel + Azipods – ABB Bus+2AziPods

48 hour operation – 2100 km Range – 25 kn 8 hr Recharging with h2/AHR 88L/min H2

2 x 250 kW Tesla Turbine Gensets running on 4x 500kW AHR 88L/min Charging POWERSOURCE while Running (8 hr recharge)

RED SUN

AERONAUTICS – Hydrogen Planes + AHR with 3656 kWh Battery!

POWERSOURCE 1300 kW with RX-8 Genset can give 2500 km range by charging hydrogen into thermal batteries~ZeroAvia plane can fly 500 miles, powered entirely by hydrogen technology that can be run on hydrogen like Opra Op 16 turbine and Mazda Rx8 wankel cycle ceramic hydrogen engine put out in 2007.

ZeroAvia, the startup that designed the hydrogen-fueled electric powertrain inside the plane, has been testing the technology over the past year and it plans to begin supplying the powertrain for use in planes with as many as 20 seats, on flights up to 500 miles long.

Several other startups are also working on technology designed to cut emissions from **air travel, an industry responsible for nearly 900 million metric tons of CO2 emissions** a year at a time when emissions need to begin to shrink to zero. But most other companies rely on batteries to store electric power. (Ampaire, a startup that recently took its first public flight, retrofits existing planes with hybrid-electric systems; Eviation, another startup, is designing 100% battery-electric planes.) ZeroAvia saw advantages in using hydrogen. “For the foreseeable future, actually getting a sizable aircraft in the air for a reasonable amount of time will be quite difficult with batteries”. A system based on hydrogen fuel cells is around four times as energy dense as the best batteries currently available, he says.

For airlines, switching to hydrogen- fueled airplanes for short flights would save money. ZeroAvia estimates that the total cost of operation will be around half that of flying conventional planes because of savings on fuel costs, more efficiency, But using liquid hydrogen would require more work in safety testing and certification; for now, the company is using compressed hydrogen stored in carbon fiber cylinders, similar to cars that are already on the road like the Toyota Mirai. The cylinders make the planes 10 to 14 x's heavier, meaning they can’t travel as far. And; cryo nitrogen makes more sense/cents and saves 95% of the cost at 2c/ kWh. Moreover you can use cheaper available stainless steel tanks and cant explode or cause metal embrittlement and corrosion. Thus, the Red Sun Non-combustion Brayton cycle jet turbine propulsion or cryo nitrogen is only practical way forward for jets and airplanes because of space (AHR as big as dishwasher) and weight, as hydrogen carbon fiber tanks are 14 x's heavier for equivalent diesel tank and fuel!

Fresh Air

To clean up the aviation industry, NASA-funded scientists are working to develop an all-electric aircraft powered by cryogenically-liquified hydrogen.

But current hydrogen cells lacked the energy density necessary to power a jet without also weighing it down too much. Cryogenically cooling the hydrogen could give rise to fuel cells dense and compact enough to do the trick, but the technology to power a plane with them doesn't exist yet —

"Advances in recent years on non-cryogenic machines and drives have brought electric propulsion of commercial regional jets closer to reality, but practical cryogenic systems remain the 'holy grail' for large aircraft because of their unmatched power density.

Petroleum-derived liquid fuels currently provide around 95% of transport energy, and roughly 60% of crude oil produced is used to make transport fuels. The demand for transport fuels across the world is very large, at around 4.9 billion liters each of gasoline and diesel and 1.3 billion liters of jet fuel *each day*, with an expected yearly growth of around 1%. Changes in the transport sector are occurring because of increasing demand driven by increasing population and prosperity;

The company is already in talks with several airlines, he says. The technology could see early adoption in places like Norway, where the government plans to move to 100% zero-emissions flights by 2040.

"The hydrogen chemical energy is converted to electrical energy through a series of fuel cells, which drive the ultra-efficient electric propulsion system. The low temperature requirements of the hydrogen system also provide opportunities to use superconducting, or lossless, energy transmission and high-power motor systems.

"It's similar to how MRIs work, magnetic resonance imaging," Ansell added. "However, these necessary electrical drivetrain systems do not yet exist, and the methods for integrating electrically

driven propulsion technologies into an aircraft platform have not yet been effectively established. This program seeks to address this gap and make foundational contributions in technologies that will enable fully electric aircraft of the future."

"Advances in recent years on non-cryogenic machines and drives have brought electric propulsion of commercial regional jets closer to reality, but practical cryogenic systems remain the 'holy grail' for large aircraft because of their unmatched power density and efficiency, "**Cryogenic H2 gives 5 x's the range as 700 bar H2.** Only 195 bar is allowed for all marine applications under IMO, whereas cryogenic nitrogen gives 40 x's the range of compress 700 bar hydrogen with 1/8th the weight as carbon fiber tanks and 1/100th cost at 2c/liter to make nitrogen from the air using electricity.

Summary Conclusions- RED SUN Transition to Clean Energy:

At this time when transport -powered largely by ICEs using mostly petroleum-based fuels for decades, is at the crossroads with Crude at $72 USD/BBL today Dec 30th, 2024. Thus, all trains, ships and eventually planes need to be retrofit along with the buildings, train stations, airports and all energy systems must be rebuilt and remodeled using the Redstar retrofit systems that feature ***RED SUN MOBILE and smaller PowerSource*** thermal batteries at 1740ºC that have been tested and certified by ***GE Marine***, ***Siemens Marine***, ***Rolls Royce***, ***Pratt and Whitney*** to ***Cummins***, ***Man*** and ***Wartsila*** - to run all jet engines, diesels and trains, the latter costing $4.9 m including a used ***GE diesel*** electric locomotive with 32 MW Red Sun/ Powersource battery retrofit in budd car connected to locomotive. This retrofit pays for itself in 196 days- including the locomotive! Plus; as part of the transition, Redstar has seven proprietary charging systems for the RED SUN / PowerSource Batteries including two proprietary Hydrogen Systems featuring the brand new Redstar algae to H2 system that retrofits every train station and makes 18 tons of biohydrogen per day from seaweed!

The RED SUN thermal battery is an adapter/transformer of wind and solar into baseload power as transformer for renewables by induction charging the thermal batteries at 98.6% and discharging at the same or other locations into ready prime time baseload power for large power plants with scalable power to retrofit and run up to Siemens 52 MW gas fired power plants- replacing gas; and; to power ICE's and diesels/turbines by pure heat in unique patented Thermal Electric Platform that allows using renewables in a baseload power plant by stabilizing and arbitraging at night renewable energy that is otherwise lost and wasted for wind and hydro.

The RED SUN Battery is also a transformer for all types of industry, while everything runs on heat- The RED SUN is the Master- including AC and large refrigeration systems for train stations and airports! And; by allowing the collection of cheap night energy to sell in the day, RED SUN Arbitrage carves a new energy niche with its mobile battery by creating a large financial gain by buying renewable energy at night by placing its mobile 4 MW to 32 MW RED SUN battery (29 tons) at renewable sites from 10 PM to 8 AM, and delivering in the day to distributed power plants to sell at peak rates.

Hydrogen is expected to be a 211 billion industry by 2020, as hydrogen planes and hydrogen cars and trucks are already out now with **Honda, Toyota and Nikola Trucks and now Zero Avia.**. Furthermore, over the next 20 year

generational scale, the shortage of oil will not constrain growth in transport; known reserves of oil have been increasing faster than consumption over the last several decades, and the current reserves should last for at least the next 50 years at current consumption rates. Therefore, it is imperative to improve the efficiency, environmental impact, and affordability of ICEs, which will mostly continue to power transport in the foreseeable future. This will cause a transition to hybrid ICE cars with electric power trains that have the ability to use hydrogen.

RETROFITTING DESEL TRAINS & ***SHIPS*** **TO RUN AT 20CON THE DOLLAR**!!

With biohydrogen from the AHR at 28c/ kg or 3 c/ kWh, Red Sun can monopolise ship and train propulsion!

Plus RED SUN gives highest energy density, critical for transportation and airplanes, tripling range and 32 MW gives 360 MWh and runs GE Diesel Electric train 700 km to with 64 MW 1400 km (and is self-charging while running) utilizing the RED SUN thermal batteries onboard. Plus RED SUN gives a safe redundant back-up system that canH store energy for months, plus have the best energy per weight ratio of any battery, at 32 MW/29 tons = 1.1 kW/kg; with an amazing 120 MWh in 6 MW (7 tonnes) with Tesla Model S at 85 kWh/540 kg = 0.16 kWh/kg. Thus RED SUN battery has seven (7) times the energy per kg as a ***Model S***, and the 32 MW RED SUN battery contains the equivalent of over ***4000 TESLA MODEL S*** batteries! Thus, lithium battery will be left behind in favor of RED SUN thermal electric platform, as nothing can beat it for energy density and giving one million long-lasting cycles (lasts 50 years and warranty from ***Thyssenkrupp*** is for 10 years) vs, 6,000 cycles (8 years) for the ***Tesla Model S***. And; introducing Redstar's AHR 88L/min, a denser version of hydrogen that can release hydrogen on demand with 40 x's more per liter than 700 bar H2 at 5.6 MJ/ kg, which is 0.5 kWh/ L only. Thus, ***heated cryo nitrogen*** **gives 40 x's the energy density**- giving the highest travel distance for large vehicles and cargo, while giving a cost of only 30 cents/kg (28 c/ kg AHR- Hydrogen +:2 c/ L N2) vs clean hydrogen in the USA is averaging $4 to $6 USD per kg- giving 1800 USD/ MWh vs $40 / MWh to run diesel engines or steam or turbines.

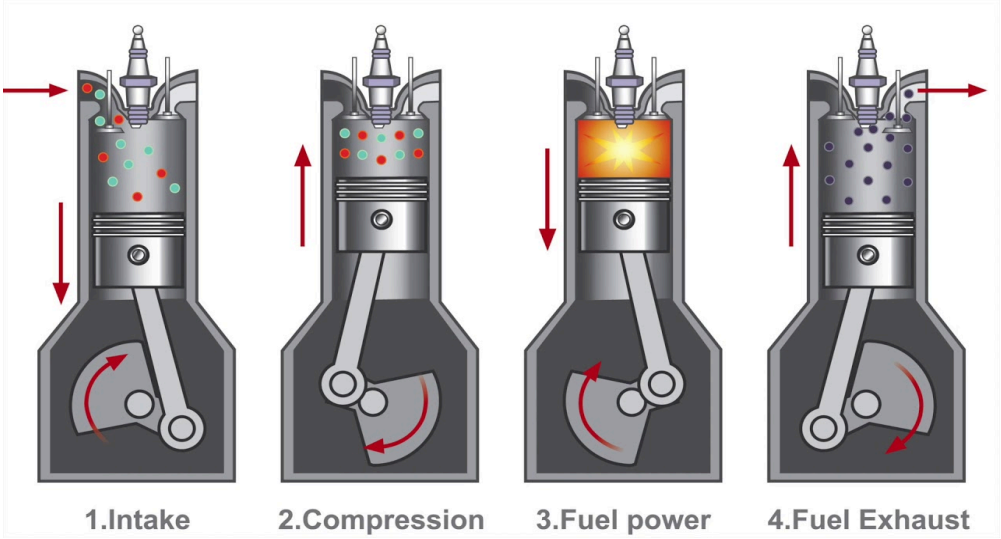
Thus, running nuclear AHR charging- gives better than an order of magnitude savings cost per mile than traditional hydrogen. Which on the ***Nikola Hydrogen Truck*** is expected to be 90 cents per mile https://nikolamotor.com/motor . Thus, with AHR 88L/min would drop running costs to 3c/kWh or 3.1 cents per mile 30 times less! The RED SUN and AHR 88L/min integrated thermal electric platform is the definition of the ***HYDROGEN ECONOMY*** **at work today!**

The CEO helped develop the Rx - 8 Mazda ceramic hydrgen engine from 1998 to 2007. A triple rotar 787 Mazda won Lemans 1981! This can support 2 pancake axial generators running 100% hydrogen for 350 kW for 1.4 MW for 4, and 2.8 MW for 8
Cost $325k for 350 MW.

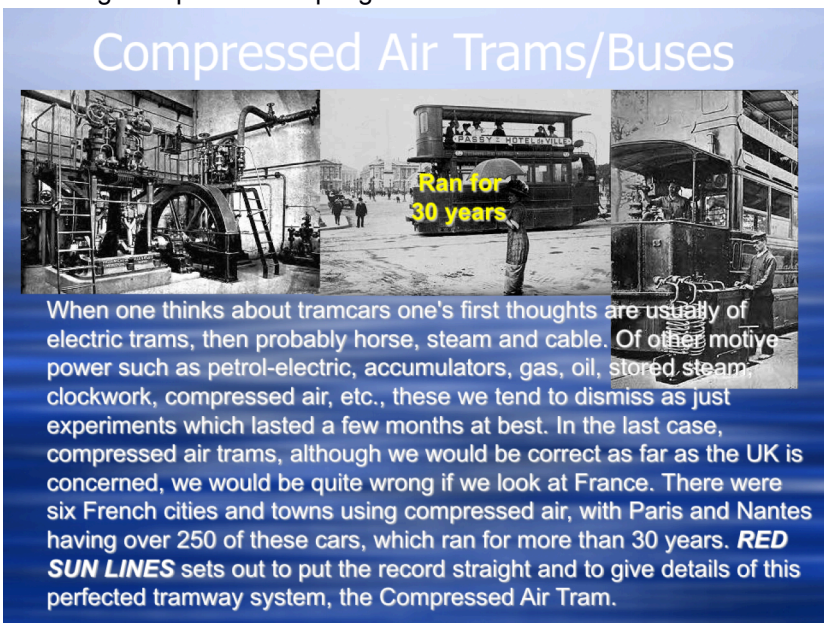
♤ The magic of ***RED SUN*** is heated compressed air gives twice the energy of gasoline 20 kWh/L vs 11 kWh/Lfor gasoline, and N2 gives 1500 x's expansion gives 3 times more power over gasoline - meaning triple HP & heavier loads for ship, train, and truck
♤ RED SUN mimics the Sun-Earth relationship by charging by induction at 98.6% efficiency!

♤ ***RED SUN/PowerSource*** outer containment designed & guaranteed 10 yr by *Thyssenkrupp!* Triple charging with 6 ME recharge is 3 hrs, which hyper-extends range 3x's to 7 x's with onboard thermal battery-turbine charging, while *AHR 88L/min.* is running ***Mazda Rx- 8*** at 350 kW or newer 112 kW ***Rx - 30*** onboard running induction 250 kW chargers, & regenerative braking charges thermal (or electric chemical battery) also! The small size allows retrofitting to all vehicles!

♤ With *RED SUN* 6 MW 120 MWh hyper-extends range 3x's to 7 x's for ships and trains plus much higher torque. Featuring ***5.55 MW Red Sun Power Block*** onboard thermal battery-turbine nuclear hydrogen / steam charging, while AHR 88L/min biohydrogen is generated onboard, & braking charges battery also!
♤ This is the thermoelectric platform mimicking the Earth and Sun- Thermoelectric molten Ni Fe alloy transforms 98.6% electricity to core heat in metal battery with incredible energy density-**a battery as big as suitcase powers turboprop 8 hours full power (180kW).**
♤ *RED SUN* uses 150 year old ***Inductotherm*** using EMF crucible to heat Ni-alloy used in refining www.inductotherm.com to heat to white hot in seconds (1500ºC) ♤ Charging like Sun-Earth at 98.6% efficiency without inverter in real time



♤ Cryo nitrogen added to all diesel rails give 3.5 x's torque as petrol heating N2 to 200°C gives 1500x's gas expansion - triple gasoline!



Above -Nitrogen trains running 1842 to 1930s throughout Europe and parts of Americas, Africa and Switzerland ran coal boilers replaced by Red Sun+ cryo Nitrogen

♤ **All engines designed to use pure heat- RED SUN gives 1450°C pure heat non- intermittently and enables 50% longer life and half the maintenance + 25 db less noise!**

♤ Thermal Nickel batteries are scalable at $20 USD per 1 kWh capacity vs ***Tesla Panasonic*** at $111 USD /1kWh capacity- **while lithium batterie are 60x's bigger than RED SUN!**♤ The Tesla battery is Li-ion that typically lasts 6 -8 years- vs ♤

♤ POWERSOURCE – 50 yr with10 year warranty from *Thyssenkrupp*.- that designs outer containment for *RED SUN/Powersource*

After the piston compresses the fuel-air mixture, the spark ignites it, causing combustion. The expansion of the combustion gases pushes the piston during the power stroke, which can be dine with 3.5x's more force or torque using cryo nitrogen.

♤ All renewables can be plugged into thermal battery + genset at 98% through standard induction EMF heat crucibles by www.inductotherm.com to store for 6 months and only lose 145°C From 1850°c to 1605 °C make baseload & back- up power!

New solid state batteries from **Toyota** are only 400 Wh per kg. ***PowerSource Ni-alloy batteries*** at 1.2 kWh+ per kg! (Red Sun reaches 2 kWh/kg with pure nickel)

♤ Redstar brings the retrofit market alive for all ships, trains, trollies, and eventually VTOLs with Redstar nickel Red Sun giving 2000Wh/ kg, which is 7 x's more dense per power to wieght storage battery- a small suitcase can run a ***Porsche Boxster*** full speed for 8 hrs! Red Sun 6 MW gives 120 MWh/ chsrge, which gives existing power and transportation infrastructure a second life fuelessly and cleanly for the nect hundred years. Moreover; only Red Sun thermal batteries with cryo nitrogen enable 109% ability to retrofit both diesel and turbines, replace fuel with pure heat travelling on carbon fiber superconductors as both diesels (expanding exploding coal dust) and turbines with ***Brayton Cycle*** pure heat engines. Both were designed together in 1897 and 1842 respectively (Sir Brayton who invented the jet engine in 1841, designed as pure heat engine!)..

♤ ***Red Sun*** and ***Powersource*** run all engines and turbines at 200ºC to 350ºC higher temperatures for 20-25% higher efficiency.

***POWERSOURCE 1300 kW (1.5 m3) – 2900 kWh/charge – weighs only 1500 kg with recharger* or smaller 330 kW – 724 kWh/charge – which weighs only 400 kg with recharging turbine**

♤ ***PowerSource & Red Sun*** Batteries recharge at less than 2.8 US cent per kWh using hydrogen at 28 cents/kg, and recharge **6 MW *Red Sun Powersource battery*** in 2 hours with Inductotherm EMF crucible charge 250 kE. Thus, Red Sun 6 MW wit **AHR** reactors give **88 L/ MIN** and run 3 z ***Opra Op 16*** turbines at 1.85 MW each. Plus ***Red Sun Arbitrage*** - collecting low-cost night hydroelectric and wind energy from 11 pm to 7 AM and

buying for $30/kWh and selling for $120/ MWh for all renewable energies to finally have a universal bridge & low- cist 4c/ kWh universal nuclear charger in one!

5.55 MW Red Sun + AHR

Opra Power Pak+6MW Red Sun Bat

Create the first universal battery charger that goes where you go onboard on ship or dock to make 5.55 MW giving 1,943 MWh/year. Once charged inboard, batteries are free to go on land for powerplants and all trains, trucks, planes or heavy and light equipment - to race cars!

***REDSTAR'S* FLUORINE CRYSTAL REACTOR IS CORROSION-PROOF AND ACID AND EXPLOSION- PROOF, AND neutron - PROOF FOR FIRST TIME!**

♤ Redstar's 100 year AHR Reactor vessel and 1st neutron- proof neutron collector- blanket wont leak or cause embrittlement and destruction of all metal, which is chemically made hydrogen, or hydrogen made with wrong frequencies.

♤ A global interest to increase the use of renewable resources has spurred an interest in hydrogen (H_2)

♤ ***Redstar redefines Hydrogen Sciences*** to reflect its metallic and refining capabilities with its brand new regenerative catalyst for high heat pyrolysis 950ªC that only produces hydrogen from algae and seaweed- at 3x's the rate of the next platinum metal catalyst Ruthenium, that costs $8650 USD per kg!

♤Redstar transforms the Economics of Flying with AHR 88L/ min 5.55 MW Powerblock - Red Sun hybrid retrofits at 1/15th the Cost of aviation - jet Fuel!
No Expensive Fuel Cell Needed!

♤Redstar Algae to H2 plant costs $8.5 million to produce 18 biohydrogen/day from algae/ seaweed or biomass on 200m2 pad- which is an order of magnitude more hydrogen per day than chemical refineries 1 sq. block!

♤ Redstar Trainer and formulator- and designer of Algae to H2 high temperature pyrolysis plant. With hundreds of reactor designs for tires, biomass and tires has been made over 35 year career by the Master Professor of chemistry and ozone tire pyrolysis patent holder- Dr Andrejs Zagaars, head professor of chemistry of Latvian Technical university & head of Latvian Tire European Recycling association- ETRA.

♤ Redstar is headed by Jay Dubinsky- the cofounder of www.originoil.com & www.originclear.com- that was top ten biotech company for 2010 and 2011- and inventor of Redstar algae to H2 process and brand new regenerative catalyst that can be recycled thousands of times for pennies per kg! With 25+ years Algae tech processing!

https://drive.google.com/file/d/1GN12SMRozTaa7-L4axuyBQftUlWaeFPP/view?usp=drivesdk

https://drive.google.com/file/d/1o8gH63rT02xxGXJKt8H-ezmtTZOt_CtD/view?usp=drivesdk

Above- Redstar *Tesla Turbine 340*

Redstar has preliminary jv agreed with NAPOCOR to do and IPO 60/ 40 JV Upon Redstar's 1st presentation to Napocor, they were excited enough to offer Redstar Energime Green Group Corp a jv and IPO plugging in 11.5 MW down to 1 MW PowerSource thermal batteries and power blocks into over 50 gensets scattered over the Philippine islands and encompassing 6 GW of power!

https://docs.google.com/presentation/d/1CcFGPVGMxbp1Q79ihVPu2sCWQM_IE5Le/edit?usp=drivesdk&ouid=103756777035209537642&rtpof=true&sd=true

Also Redstar is Nuclear Advisor to the Office of the President and the DOE, and plan to build 24 nuclear plants with the top nuclear engineers and chemists of America, which Redstar has jvs with,

including one company that are insurance boiler inspectors and have 150 years designing, building and running nuclear and thermal plants and are instructors for the Navy Nuclear fleet! Redstar has assembled the best nuclear and power team including supervising chemist- master professor of Chemistry of The ***Latvian Technical University*** - ***Andrejs Zagars*** (my teacher and mentor for 6.5 years). Dr Andrejs will join us in Jan to set up our pyrolysis and nuclear reactors and composite manufacturing in Subic.

Jv partners in Japan:

Toyota Racing Team
Mazda Racing Team - Rx 8 ceramic hydrogen rotary engine development
Honda Racing Team
Dr Ohmasa- AHR 88L/min H2 -similar Gas Development

https://drive.google.com/file/d/1o8gH63rT02xxGXJKt8H-ezmtTZOt_CtD/view?usp=drivesdk

We are working with the top nickel property with 60% nickel. We will build a refinery - smelter to make black matte and eventually stainless steel on this 5000 ha in South Mindanao. It has full geological surveys.

Huge Electriciemand:

As some many cities and islands only receive 2 hours of electricity, Logically and financially, Red Sun delivered batteries are only answer. And; the Red Sun retrofits easily all existing diesel generators, running them without fuel on expanding heated N2 gases (1500x' s expansion at 200°C vs 432 gasoline expansion at 550°C) givesc3.5x's as much torque iver diesel! Moreover; Red Sun phase change nickel iron alloy battery delivers pure heat at 1400°C, and works even better on turbines, increasing efficiency 20% and life 50%. Plus; we have tested with every turbine and diesel engine maker in existence- including GE and Cummins- which are on all your ex- American Navy Ships sitting now in Subic! We will jv with your Navy also - to be of maximum service to the Philippines, DOE and Napocor of course! We charge at 6 US 9cents/ kWh, while you see the LCOE for diesel is 43 cents US/ kWh by our German associates. Thus our Red Sun installation pays off on a ship in a few months with Redstar price of $120/ MWh, so there is zero risk, as the Navy Secretary complained to Redstsr they spend ***P11,000,000/ day*** every time they go out! Thus, they can only afford to go out once a week, as they use between 40 m3 to 60 m3 of diesel per day per ship! The Red Sun Power Block will save them 75% on propulsion and energy costs.

Also, Red Sun comes with a 10 year warranty from ***Thyssenkrupp*** and is covered along with Philippine contracts with a policy and wrap by ***Lloyd's Insurance***. Thus, we can securitize the financing of all Philippines Power and infrastructure projects. This is what we wish to delve into during our next meetings.we are at your service.
https://drive.google.com/file/d/1IVB56NCfLTLdXfRFyqxUss4nAqL8BVOJ/view?usp=drivesdk

New transmission lines needed to take in Renewable Energy as planned, in all countries, or they need to hire Red Sun thermal battery delivery:
https://www.theguardian.com/business/2023/nov/25/race-to-get-uk-electricity-grid-ready-for-net-zero?CMP=share_btn_link ,

In the UK they need 100 km/ day till 2040 according to the article-
23 years x 365 days/ year x $350k/ km = $2.9 trillion USD!
In the US, according to NREL, they need 10,000 miles (16,093 km) installed per day until 2035.

16,093/ day x x 365 days/ year x 12 years = $34,6 trillion USD For wiring up america doubling the National debt to 240% of GDP per year!

Obviously doubling the national debt is not a good idea- thus the countries need Red Sun thermal batteries for hire at 6 cents/ kWh charged with nuclear or 10 cents/ kWh charged by OP16 **Gas Turbine** Genset Turbine Genset, which, in turn, is powered by AHR small nuclear reactors.

Opra Op 16 Specs:

Performance for Natural Gas* OP16 Gas Performance for Natural Gas* @ISO conditions @ISO conditions ower Output (p.f. = 1) Output (p.f. = 1) Power kWe 1,876 kWe 1,876 Turbine Genset % Performance 25.1 Natural Gas* for electrical Efficiency (p.f. OP16 Gas% (p.f. = 1) 25.1 Electrical Efficiency = 1) Features @ISO conditions fuel consumption consumption Fuel MBTU/h 25,485 3 MBTU/h 25,485 Power Output (p.f. = 1) kWe 1,876 mg/Nm OP16 Gas Turbine Genset 13,585 3 for ppmv) CO Natural eat Rate (p.f. = 1)Heat OP16 (p.f. =Turbine Genset Performance(10 Natural Gas* @ full load Rate Gas 1) BTU/kWh<10 Performance For 25.1 BTU/kWh 13,585 Gas* Low emissions*:(p.f. = 1) Electrical Efficiency % @ISO 71,296 @ISO conditions (15 ppmv) NO @ full load <30 conditions mg/Nm exhaust Gas Flow Fuel consumption Exhaust Gas Flow lb/h lb/h 71,296 x kJ/s 1,8767,474 Power Output (p.f. 1) kWe 1,876 Power Output (p.f. = = 1) kWe exhaust Gas Temperature (p.f. = 1) Exhaust Gas Temperature °F 1063 24 hour inspection per year °F 1063 High Rate availability:== 1) One kJ/kWh 14,343 Heat Electrical Efficiency (p.f. % 25.1 Electrical Efficiency (p.f. 1) % 25.1 pressure Ratio Fuel consumption Pressure Ratio 6.7:1 kg/s 7,4748.98 hrs 6.7:1 TBO: 42,500 Exhaust Gas Flow Fuel consumption kJ/s 7,474 kJ/s generator VoltageExhaust(p.f. ==Temperature upGaseous, liquid and biofuels Generator(p.f. 1) to 13.8 kV°C up Fuel flexibility: Heat Rate Voltage kJ/kWh 14,343 573 Heat Rate Gas1) kV kJ/kWh 14,343 to 13.8 Low noise**: Frequency Flow 50/60 <85 dBA @ 1m Hz Exhaust Gas Flow kg/s 8.98 50/60 Exhaust GasRatio Hz kg/s 8.98 6.7:1 Pressure * Exhaust Gas Temperature Natural fuel db(A) °C kV Exhaust Gas Temperature °Cdb(A) 573 <80 13.8 oise** Noise** gas Voltage <80 @ 3ft 573 up to@ 3ft Generator ** Lower levels are available upon request Pressure Ratio 6.7:1 Pressure Ratio Systems available - -(Standard) 50/60 combustion systems available Combustion 3A - Hz 6.7:1 3A (Standard) Frequency Generator Voltage 13.8 3BkV db(A)up to <80(Dry-low emissions) (Dry-low up to13.8 @ 1m emissions) 3B Generator Voltage kV Noise** 3CHz (Low calorific fuels) calorific fuels) 3C Frequency 50/60 Frequency Hz 50/60 (Low Combustion systems available 3A (Standard) ime between major overhaul major overhaul db(A) Time between hours 42,500 hours <80 @ 1m 42,500 Noise** db(A) <80 3B1m @ (Dry-low emissions) Noise** Multiple fuels possible: LPG, Diesel, Flare Gas, Biogas,-Syngas, Pyrolysis oil etc.calorific fuels) *Combustion systems available Multiple fuels possible: LPG, Biogas, (Low Combustion systems availableDiesel, Flare Gas,3A (Standard) Pyrolysis oil etc. 3A (Standard) 3C Syngas, Lower levels are available upon are available upon request ** Lower levels request 3B (Dry-low emissions) 3B (Dry-low emissions) Time between major overhaul hours 42,500 (Low calorific fuels) PerformanceLPG, Diesel, Flare Gas, 3 Conditions, Natural Gas) values (ISO3C(Low calorific fuels) oil etc * Multiple fuels possible: Biogas, Syngas, Pyrolysis Exhaust Gas Temperature [ºC] Exhaust Gas Temperature [ºC] Exhaust Gas Flow [kg/s] Exhaust Gas Flow [lb/h] Heat Rate [BTU/kWh] Exhaust Gas Flow [kg/s] Exhaust GasEfficiency [%] Electrical Flow [kg/s] Electrical Efficiency [%] Electrical Efficiency [%] Heat Rate [BTU/kWh] Electrical Power [kWe] [kWe] Electrical Power Time between major overhaul hours Time between are available upon request hours performance Curves levelsmajor overhaul power Performance Curves ** Ambient Lower Electric Dimensions Dimensions Dimensions Dimensions OPRA Turbines OPRA Turbines Opra OPRA Turbines Turbines PRA TurbinesOpaalstraat60 Opaalstraat 60 OPRA 60 OpaalstraatTurbines paalstraat 60 7554TS Hengelo **Opaalstraat**

5.55 Red Sun Power Block FINANCIAL PRO FORMA:

5.55 MW 5.55 MW POWER BLOCK FOR SHIPS

6 MW RED SUN + 4x AHR + 3 x Opra 16

Year	0	1	2	3	4	5	6	7	8
	2025	2026	2027	2028	2029	2030	2031	2032	2033
CAPITAL EXPENDITURES ($1000 USD)									
Equity Investment Capex	−6230								
REVENUES ($USD)									
MWh/yr		36600	36600	36600	36600	36600	36600	36600	36600
PPA Rate ($/kWh)		0.12	0.12	0.12	0.12	0.12	0.12	0.12l	0.12
Am241 + Po211 350d/yx8g/d=(g/yr)		2800	2800	2800	2800	2800	2800	2800	2800
Radioisotope Sales Revenue$2k/g($/yr)		5600000	5600000	5600000	5600000	5600000	5600000	5600000	5600000
Electricity Sales ($) Revenue per PPA		3772000	3772000	3772000	3672000	3672000	3672000	3672000	3672000
Green Tag Rate		0	0	0	0	0	0	0	0
Green Tag Sales Revenue		0	0	0	0	0	0	0	0
Carbon Credits (t) 0.553 tCO2/MWh		20,240	20240	20240	20240	20240	20240	20240	20240
Carbon Credits ($) $24/tCO2 Ave. 2024		485,700	485700	485700	485700	485700	485700	485700	485700
Production Incentive Payments		0	0	0	0				
TOTAL REVENUE		9858000	9858000	9858000	9858000	9858000	9858000	9858000	9858000
EXPENSES ($1000)									
Operations & Maintenance		445	446.35	447.741	449,173	450,648	452,167	453,732	455,344
Contingency Fund		25	25,5	26,01	26,53	27,061	27,602	28,154	28,717
Project Management Fee		70	71,4	72.828	74.29	75.77	77.29	78.83	80.41
Insurance		21	21.42	22	22.3	22.7	23.2	23.65	24.12
Property Tax		99	99	99	99	99	99	99	99
Leaseholder Payments 48 mo		248	248	248	248	248	248	248	248
Admin/Financial/Legal Management		5	5,1	5,202	5.31	5.41	5.55	5.63	5.74

Production Tax Expense	12.1	12.2	12.5	12.8	12.9	13.0	13.2	13.3
Warranty Expense	20	20.4	20.81	21.22	21.65	22.3	22.87	23.47
Shipping costs of radioisotopes	35	35	35	35	35	35	35	35
Personnel	320	320	320	320	320	320	320	320
purchasing night hydroelec	900	900	900	900	900	900	900	900
Annual total Opex	**2204**	**2204**	**2204**	**2204**	**2204**	**2204**	**2204**	**2204**

EBITDA & Taxable Income ($1000 USD)

EBITDA	**7654**	**7654**	**7654**	**7654**	**7654**	**7654**	**7654**	**7654**
Depreciation	625	625	625	625	625	625	625	625
Debt Interest Payment	253	253	253	253	253	253	253	253
Total Annual Expenses	**3082**	**3082**	**3082**	**3082**	**3082**	**3082**	**3082**	**3082**
Income								
Accumulated	6776	13552	20328	27040	33880	40660	47432	54208
Taxable Income	**6776**	**6776**	**6776**	**6776**	**6776**	**6776**	**6776**	**6776**
Return on Investment %	**108%**	**216%**	**325%**	**434%**	**542%**	**650%**	**759%**	**867%**

TAXES

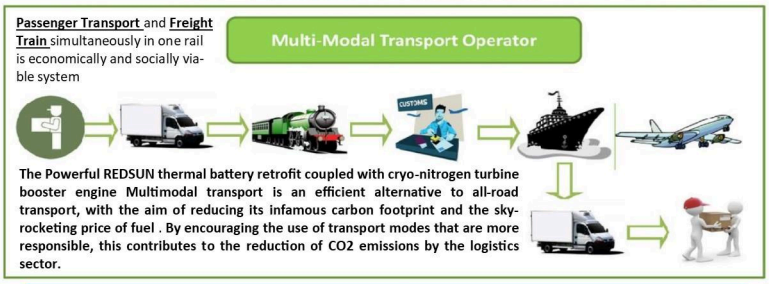
Redstar's World- Class Science & Engineering Team

Jay Dubinsky**, **CEO
Redstar Energime Green Group
www.redstarRedstar.com
+ 63 945 186 9816
Whatsapp

+ 66 618 485 949

with pure nickel but $$$$)
Redstar brings the retrofit market alive for all ships, trains, trollies, and eventually VTOLs with Redstar nickel Red Sun giving 2000Wh/ kg, which is 7 x's more dense per power to wieght storage battery- a small suitcase can run a ***Porsche Boxster*** full speed for 8 hrs! Red Sun 6 MW gives 120 MWh/ chsrge, which gives existing power and transportation infrastructure a second life fuelessly and cleanly for the nect hundred years. Moreover; only Red Sun thermal batteries with cryo nitrogen enable 109% ability to retrofit both diesel and turbines, replace fuel with pure heat travelling on carbon fiber superconductors as both diesels (expanding exploding coal dust) and turbines with ***Brayton Cycle*** pure heat engines. Both were designed together in 1897 and 1842 respectively (Sir Brayton who invented the jet engine in 1841, which he designed as pure heat engine!)..
Red Sun and ***Powersource*** run all engines and turbines at 200ºC to 350ºC higher temperatures for 20-25% higher efficiency.

***POWERSOURCE 1300 kW (1.5 m3) – 2900 kWh/charge – weighs only 1500 kg with recharger* or smaller 330 kW – 724 kWh/charge – which weighs only 400 kg with recharging turbine**
PowerSource & Red Sun Batteries recharge at less than 1 US cent per kWh using hydrogen at 28 cents/kg, and recharge **6 MW *Red Sun Powersource battery*** in 2 hours with Inductotherm EMF crucible charge 250 kE. Thus, Red Sun 6 MW wit **AHR** reactors give **88 L/ MIN** and run 3 z ***Opra Op 16*** turbines at 1.85 MW each. Plus ***Red Sun Arbitrage*** - collecting low-cost night hydroelectric and wind energy from 11 pm to 7 AM and buying for $30/ kWh and selling for $120/ MWhfor all renewable energies to finally have a universal bridge & low- cist 4c/ kWh universal nuclear charger in one!



5.55 MW Red Sun + AHR

Opra Power Pak+6MW Red Sun Bat

Create the first universal battery charger that goes where you go onboard on ship or dock to make 5.55 MW giving 1,943 MWh/year.

Once charged inboard, batteries are free to go on land for powerplants and all trains, trucks, planes or heavy and light equipment - to race cars!

***REDSTAR'S* FLUORINE CRYSTAL REACTOR** IS **CORROSION-PROOF AND ACID AND EXPLOSION-PROOF, AND neutron - PROOF** FOR FIRST TIME!

Redstar's 100 year AHR Reactor vessel and 1st neutin- proof neutron collector- blanket wont leak or cause embrittlement and destruction of all metal, which chemically made hydrogen, or hydrogen made with wrong frequencies.

A global interest to increase the use of renewable resources has spurred an interest in hydrogen (H_2)

♤ ***Redstar redefines Hydrogen Sciences*** to reflect its metallic and refining capabilities with its brand new regenerative catalyst for high heat pyrolysis 950ªC that only produces hydrogen from algae and seaweed- at 3x's the rate of the next platinum metal catalyst Ruthenium, that costs $8650 USD per kg!

♤**Redstar transforms the Economics of Flying with AHR 88L/ min 5.55 MW Powerblock - Red Sun hybrid retrofits at 1/15th the Cost of aviation - jet Fuel!**
No Expensive Fuel Cell Needed!

♤**Redstar Algae to H2 plant costs $8.5 million to produce 18 biohydrogen/day from algae/ seaweed or biomass on 200m2 pad- which is an order of magnitude more hydrogen per day than chemical refineries 1 sq. block!**

♤ **Redstar Trainer and formulator- and designer of Algae to H2 high temperature pyrolysis plant. With hundreds of reactor designs for tires, biomass and tires has been made over 35 year career by the Master Professor of chemistry and ozone tire pyrolysis patent holder- Dr Andrejs Zagaars, head professor of chemistry of Latvian Technical university & head of Latvian Tire European Recycling association- ETRA.**

♤ **Redstar is headed by Jay Dubinsky- the cofounder of www.originoil.com & www.originclear.com- that was top ten biotech company for 2010 and 2011- and inventor of Redstar algae to H2 process and brand new regenerative catalyst that can be recycled thousands of times for pennies per kg! With 25+ years Algae tech processing!**

https://drive.google.com/file/d/1GN12SMRozTaa7-L4axuyBQftUlWaeFPP/view?usp=drivesdk

https://drive.google.com/file/d/1o8gH63rT02xxGXJKt8H-ezmtTZOt_CtD/view?usp=drivesdk

Above- Redstar *Tesla Turbine 340*

Redstar has preliminary jv agreed with NAPOCOR to do and IPO 60/ 40 JV Upon Redstar's 1st presentation to Napocor, they were excited enough to offer Redstar Energime Green Group Corp a jv and IPO plugging in 11.5 MW down to 1 MW PowerSource thermal batteries and power blocks into over 50 gensets scattered over the Philippine islands and encompassing 6 GW of power!

https://docs.google.com/presentation/d/1CcFGPVGMxbp1Q79ihVPu2sCWQM_IE5Le/edit?usp=drivesdk&ouid=103756777035209537642&rtpof=true&sd=true

Also Redstar is Nuclear Advisor to the Office of the President and the DOE, and plan to build 24 nuclear plants with the top nuclear engineers and chemists of America, which Redstar has jvs with, including one company that are insurance boiler inspectors and have 150 years designing, building and running nuclear and thermal plants and are instructors for the Navy Nuclear fleet! Redstar has assembled the best nuclear and power team including supervising chemist- master professor of

Chemistry of The ***Latvian Technical University*** - ***Andrejs Zagars*** (my teacher and mentor for 6.5 years). Dr Andrejs will join us in Jan to set up our pyrolysis and nuclear reactors and composite manufacturing in Subic.

Jv partners in Japan:

Toyota Racing Team
Mazda Racing Team - Rx 8 ceramic hydrogen rotary engine development
Honda Racing Team
Dr Ohmasa- AHR 88L/min H2 -similar Gas Development

https://drive.google.com/file/d/1o8gH63rT02xxGXJKt8H-ezmtTZOt_CtD/view?usp=drivesdk

We are working with the top nickel property with 60% nickel. We will build a refinery - smelter to make black matte and eventually stainless steel on this 5000 ha in South Mindanao. It has full geological surveys.

Huge Electriciemand:

As some many cities and islands only receive 2 hours of electricity, Logically and financially, Red Sun delivered batteries are only answer. And; the Red Sun retrofits easily all existing diesel generators, running them without fuel on expanding heated N2 gases (1500x' s expansion at 200°C vs 432 gasoline expansion at 550°C) givesc3.5x's as much torque iver diesel! Moreover; Red Sun phase change nickel iron alloy battery delivers pure heat at 1400°C, and works even better on turbines, increasing efficiency 20% and life 50%. Plus; we have tested with every turbine and diesel engine maker in existence- including GE and Cummins- which are on all your ex- American Navy Ships sitting now in Subic! We will jv with your Navy also - to be of maximum service to the Philippines, DOE and Napocor of course! We charge at 6 US 9cents/ kWh, while you see the LCOE for diesel is 43 cents US/ kWh by our German associates. Thus our Red Sun installation pays off on a ship in a few months with Redstar price of $120/ MWh, so there is zero risk, as the Navy Secretary complained to Redstsr they spend ***P11,000,000/ day*** every time they go out! Thus, they can only afford to go out once a week, as they use between 40 m3 to 60 m3 of diesel per day per ship! The Red Sun Power Block will save them 75% on propulsion and energy costs.

Also, Red Sun comes with a 10 year warranty from ***Thyssenkrupp*** and is covered along with Philippine contracts with a policy and wrap by ***Lloyd's Insurance***. Thus, we can securitize the financing of all Philippines Power and infrastructure projects. This is what we wish to delve into during our next meetings.we are at your service.
https://drive.google.com/file/d/1lVB56NCfLTLdXfRFyqxUss4nAqL8BVOJ/view?usp=drivesdk

New transmission lines needed to take in Renewable Energy as planned, in all countries, or they need to hire Red Sun thermal battery delivery:
https://www.theguardian.com/business/2023/nov/25/race-to-get-uk-electricity-grid-ready-for-net-zero?CMP=share_btn_link ,

In the UK they need 100 km/ day till 2040 according to the article-
23 years x 365 days/ year x $350k/ km = $2.9 trillion USD!
In the US, according to NREL, they need 10,000 miles (16,093 km) installed per day until 2035.
16,093/ day x x 365 days/ year x 12 years = $34,6 trillion USD For wiring up america doubling the National debt to 240% of GDP per year!

Obviously doubling the national debt is not a good idea- thus the countries need Red Sun thermal batteries for hire at 6 cents/ kWh charged with nuclear or 10 cents/ kWh charged by OP16 **Gas Turbine** Genset Turbine Genset
Which is powered by AHR small nuclear reactors.

Opra Op 16 Specs:

Performance for Natural Gas* OP16 Gas Performance for Natural Gas* @ISO conditions @ISO conditions ower Output (p.f. = 1) Output (p.f. = 1) Power kWe 1,876 kWe 1,876 Turbine Genset % Performance 25.1 Natural Gas* for electrical Efficiency (p.f. OP16 Gas% (p.f. = 1) 25.1 Electrical Efficiency = 1) Features @ISO conditions fuel consumption consumption Fuel MBTU/h 25,485 3 MBTU/h 25,485 Power Output (p.f. = 1) kWe 1,876 mg/Nm OP16 Gas Turbine Genset 13,585 3 for ppmv) CO Natural eat Rate (p.f. = 1)Heat OP16 (p.f. =Turbine Genset Performance(10 Natural Gas* @ full load Rate Gas 1) BTU/kWh<10 Performance For 25.1 BTU/kWh 13,585 Gas* Low emissions*:(p.f. = 1) Electrical Efficiency % @ISO 71,296 @ISO conditions (15 ppmv) NO @ full load <30 conditions mg/Nm exhaust Gas Flow Fuel consumption Exhaust Gas Flow lb/h lb/h 71,296 x kJ/s 1,8767,474 Power Output (p.f. 1) kWe 1,876 Power Output (p.f. = = 1) kWe exhaust Gas Temperature (p.f. = 1) Exhaust Gas Temperature °F 1063 24 hour inspection per year °F 1063 High Rate availability:== 1) One kJ/kWh 14,343 Heat Electrical Efficiency (p.f. % 25.1 Electrical Efficiency (p.f. 1) % 25.1 pressure Ratio Fuel consumption Pressure Ratio 6.7:1 kg/s 7,4748.98 hrs 6.7:1 TBO: 42,500 Exhaust Gas Flow Fuel consumption kJ/s 7,474 kJ/s generator VoltageExhaust(p.f. ==Temperature upGaseous, liquid and biofuels Generator(p.f. 1) to 13.8 kV°C up Fuel flexibility: Heat Rate Voltage kJ/kWh 14,343 573 Heat Rate Gas1) kV kJ/kWh 14,343 to 13.8 Low noise**: Frequency Flow 50/60 <85 dBA @ 1m Hz Exhaust Gas Flow kg/s 8.98 50/60 Exhaust GasRatio Hz kg/s 8.98 6.7:1 Pressure * Exhaust Gas Temperature Natural fuel db(A) °C kV Exhaust Gas Temperature °Cdb(A) 573 <80 13.8 oise** Noise** gas Voltage <80 @ 3ft 573 up to@ 3ft Generator ** Lower levels are available upon request Pressure Ratio 6.7:1 Pressure Ratio Systems available - -(Standard) 50/60 combustion systems available Combustion 3A - Hz 6.7:1 3A (Standard) Frequency Generator Voltage 13.8 3BkV db(A)up to <80(Dry-low emissions) (Dry-low up to13.8 @ 1m emissions) 3B Generator Voltage kV Noise** 3CHz (Low calorific fuels) calorific fuels) 3C Frequency 50/60 Frequency Hz 50/60 (Low Combustion systems available 3A (Standard) ime between major overhaul major overhaul db(A) Time between hours 42,500 hours <80 @ 1m 42,500 Noise** db(A) <80 3B1m @ (Dry-low emissions) Noise** Multiple fuels possible: LPG, Diesel, Flare Gas, Biogas,-Syngas, Pyrolysis oil etc.calorific fuels) *Combustion systems available Multiple fuels possible: LPG, Biogas, (Low Combustion systems availableDiesel, Flare Gas,3A (Standard) Pyrolysis oil etc. 3A (Standard) 3C Syngas, Lower levels are available upon are available upon request ** Lower levels request 3B (Dry-low emissions) 3B (Dry-low emissions) Time between major overhaul hours 42,500 (Low calorific fuels) PerformanceLPG, Diesel, Flare Gas, 3 Conditions, Natural Gas) values (ISO3C(Low calorific fuels) oil etc * Multiple fuels possible: Biogas, Syngas, Pyrolysis Exhaust Gas Temperature [ºC] Exhaust Gas Temperature [ºC] Exhaust Gas Flow [kg/s] Exhaust Gas Flow [lb/h] Heat Rate [BTU/kWh] Exhaust Gas Flow [kg/s] Exhaust GasEfficiency [%] Electrical Flow [kg/s] Electrical Efficiency [%] Electrical Efficiency [%] Heat Rate [BTU/kWh] Electrical Power [kWe] [kWe] Electrical Power Time between major overhaul hours Time between are available upon request hours erformance Curves levelsmajor overhaul power Performance Curves ** Ambient Lower Electric Dimensions Dimensions Dimensions Dimensions OPRA Turbines OPRA Turbines Opra OPRA Turbines Turbines PRA TurbinesOpaalstraat60 Opaalstraat 60 OPRA 60 OpaalstraatTurbines paalstraat 60 7554TS Hengelo **Opaalstraat**

5.55 Red Sun Power Block FINANCIAL PRO FORMA:

5.55 MW
6 MW RED
SUN + 4x 5.55 MW POWER BLOCK FOR SHIPS

AHR + 3 x Opra 16

Year	0	1	2	3	4	5	6	7	8
	2025	2026	2027	2028	2029	2030	2031	2032	2033
CAPITAL EXPENDITURES ($1000 USD)									
Equity Investment Capex	−6230								
REVENUES ($USD)									
MWh/yr		36600	36600	36600	36600	36600	36600	36600	36600
PPA Rate ($/kWh)		0.12	0.12	0.12	0.12	0.12	0.12	0.12l	0.12
Am241 + Po211 350d/yx8g/d=(g/yr)		2800	2800	2800	2800	2800	2800	2800	2800
Radioisotope Sales Revenue$2k/g($/yr)		5600000	5600000	5600000	5600000	5600000	5600000	5600000	5600000
Electricity Sales ($) Revenue per PPA		3772000	3772000	3772000	3672000	3672000	3672000	3672000	3672000
Green Tag Rate		0	0	0	0	0	0	0	0
Green Tag Sales Revenue		0	0	0	0	0	0	0	0
Carbon Credits (t) 0.553 tCO2/MWh		20,240	20240	20240	20240	20240	20240	20240	20240
Carbon Credits ($) $24/tCO2 Ave. 2024		485,700	485700	485700	485700	485700	485700	485700	485700
Production Incentive Payments		0	0	0	0				
TOTAL REVENUE		9858000	9858000	9858000	9858000	9858000	9858000	9858000	9858000
EXPENSES ($1000)									
Operations & Maintenance		445	446.35	447.741	449,173	450,648	452,167	453,732	455,344
Contingency Fund		25	25,5	26,01	26,53	27,061	27,602	28,154	28,717
Project Management Fee		70	71,4	72.828	74.29	75.77	77.29	78.83	80.41
Insurance		21	21.42	22	22.3	22.7	23.2	23.65	24.12
Property Tax		99	99	99	99	99	99	99	99
Leaseholder Payments 48 mo		248	248	248	248	248	248	248	248
Admin/Financial/Legal Management		5	5,1	5,202	5.31	5.41	5.55	5.63	5.74
Production Tax Expense		12.1	12.2	12.5	12.8	12.9	13.0	13.2	13.3

Warranty Expense	20	20.4	20.81	21.22	21.65	22.3	22.87	23.47
Shipping costs of radioisotopes	35	35	35	35	35	35	35	35
Personnel	320	320	320	320	320	320	320	320
purchasing night hydroelec	900	900	900	900	900	900	900	900
Annual total Opex	**2204**	**2204**	**2204**	**2204**	**2204**	**2204**	**2204**	**2204**

EBITDA & Taxable Income ($1000 USD)

EBITDA	**7654**	**7654**	**7654**	**7654**	**7654**	**7654**	**7654**	**7654**
Depreciation	625	625	625	625	625	625	625	625
Debt Interest Payment	253	253	253	253	253	253	253	253
Total Annual Expenses	**3082**	**3082**	**3082**	**3082**	**3082**	**3082**	**3082**	**3082**
Income								
Accumulated	6776	13552	20328	27040	33880	40660	47432	54208
Taxable Income	**6776**	**6776**	**6776**	**6776**	**6776**	**6776**	**6776**	**6776**
Return on Investment %	**108%**	**216%**	**325%**	**434%**	**542%**	**650%**	**759%**	**867%**

TAXES

Redstar's World- Class Science & Engineering Team

Jay Dubinsky**, **CEO
Redstar Energime Green Group
www.redstarRedstar.com
+ 63 945 186 9816
Whatsapp
+ 66 618 485 949